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16. Abstract <p>The objective of this report is to share the experience gained during the development of a performance evaluation methodology for public transportation in the State of Michigan. The report documents the process through which an evaluation methodology was developed including a review of project objectives, milestones, meetings and products. The report is not intended to provide a detailed review of technical assessment of the methodology itself.</p> <p>Two major lessons were learned during the development of the evaluation methodology for mid-size transit systems in Michigan. First, there is a need to establish the groundwork for conducting performance evaluations. Second, the concerns and perspectives of public transportation systems regarding performance evaluation must be addressed and integrated into the development and implementation of the evaluation program.</p> <p>Although the paper is based on the experience of one state government agency, the findings and conclusions are generally applicable to other organizations that may evaluate public transportation performance, particularly those that provide or administer funding.</p>			
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Statewide Transit Evaluation in Michigan

Final Report
July 1981

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STATEWIDE TRANSIT EVALUATION: MICHIGAN

A Guide to the Development of
An Evaluation Methodology
For Public Transportation
Lessons Learned From
The Michigan Experience

July 1981

Prepared by:

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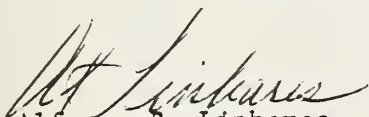
Increased concern for the accountability of public services and the efficiency and effectiveness of transit system performance has generated significant interest throughout the United States in the development and application of performance evaluation methodologies. UMTA has funded through its Section 8 Technical Studies Program, local studies to facilitate improvements in transit performance monitoring and evaluation practices. The purpose of these studies is to aid the providers and supporters of public transit services to improve the efficiency and effectiveness of transit in the United States.

This document summarizes the process through which an evaluation methodology was developed for the mid-size transit systems in Michigan and the lessons learned during the development period. This report is important because it identifies the types of issues that may confront other areas that may be considering a similar effort.

Additional copies of this report are available from the National Technical Information Service (NTIS), Springfield, Virginia 22161.



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EXECUTIVE SUMMARY

Since the early 1960's, public involvement in the provision of transportation services has dramatically increased. Once operated exclusively by private enterprise, transportation is now often viewed as a service which provides benefits to the community and therefore merits public support. Interest in the provision of transportation services has resulted in significant increases in public spending for facilities, equipment and operation. Accompanying the increased spending has been an emerging concern for the effectiveness and efficiency of the management and operation of publicly supported transportation services.

State governments and other agencies that fund transportation services are becoming more routinely involved in their evaluation. The increased support for transportation finance by state and local governments will lead to increased concern for accountability and the efficiency and effectiveness of these services.

States such as Pennsylvania, California, New York, and, more recently, Michigan have led the nation in implementing requirements for statewide reporting on public transportation. Other states or organizations now considering the development and implementation of similar evaluation procedures can benefit from the experience of these states. Familiarity with their success and problems can facilitate development of effective evaluation activities.

The objective of this report is to share the experience gained during the development of a performance evaluation methodology for public transportation in the State of Michigan. The report documents the process through which an evaluation methodology was developed including a review of project objectives, milestones, meetings and products. The report is not intended to provide a detailed review or technical assessment of the methodology itself. Although the paper is based on the experience of one state government agency, the findings and conclusions are generally applicable to other organizations that may evaluate public transportation performance, particularly those that provide or administer funding.

OVERVIEW OF THE DEVELOPMENT AND TESTING OF A TRANSIT EVALUATION PROGRAM IN MICHIGAN

Several bills and acts passed by the Michigan State Legislature during the fall of 1978 called for improved information from state agencies to demonstrate the efficiency and effectiveness of state funded transportation programs. Specifically:

- o Act No. 51, Section 10H(1)(b) requires the State Transportation Commission to prepare a progress report to the state legislature, Department of Management and Budget (DMB) and Auditor General each year by April 1 accounting for the use of state funds for transportation during the previous year; and
- o Act 468, an appropriation bill, requires each department or agency to furnish resource and performance data to demonstrate the efficiency and effectiveness of each program or project and if necessary to prepare a report explaining why anticipated levels of productivity cannot be met.

Following the passage of this legislation, the Bureau of Urban and Public Transportation (UPTRAN) of the Michigan Department of Transportation initiated a project to Develop and Test an Evaluation Methodology for the Mid-size Transit Systems in Michigan. The development of this methodology was intended to serve as the first step toward the development and application of evaluation methodologies for each transportation mode receiving financial assistance from the State of Michigan.

The project, initiated by UPTRAN in 1978, included four phases and was conducted between February and October 1979.

- o Phase I included research on prior experience in transit system evaluation methodologies.
- o Phase II involved developing an evaluation methodology based on Phase I research and the requirements for evaluation established by the Michigan legislature and UPTRAN.
- o Phase III included a pilot application of the methodology. (The pilot test was based on data from one transit system in Michigan and from transit systems outside of Michigan.)
- o Phase IV involved documenting the methodology and pilot application results as well as producing a manual which defined the data routinely used in the evaluations.

The project was conducted by UPTRAN in conjunction with a project steering committee. The committee met at the initiation of each phase and at interim project milestones.

Following the completion of the project in which the evaluation methodology was developed and pilot tested, UPTRAN intended to implement the evaluation program. This effort met with resistance from representatives of the mid-size transit operators in Michigan who insisted that the methodology should first be more extensively tested, through pilot application in each of Michigan's ten mid-size transit systems and then subsequently refined by incorporating transit operator input.

In response to the operators' concerns, UPTRAN initiated a second project to undertake more extensive testing and refinement of the evaluation methodology. This project is currently in progress and should be completed by December 1981.

The primary objective of this report is to share the experience gained in Michigan with other states and local areas that may be initiating similar efforts to evaluate public transportation services. The detailed account of the Michigan experience also sets forth the context in which this experience was gained.

LESSONS LEARNED IN THE DEVELOPMENT OF THE EVALUATION METHODOLOGY

Two major lessons were learned during the development of the evaluation methodology for mid-size transit systems in Michigan. First, there is a need to establish the groundwork for conducting performance evaluations. Second, the concerns and perspectives of public transportation systems regarding performance evaluation must be addressed and integrated into the development and implementation of the evaluation program.

Importance of Establishing the Groundwork for Conducting Evaluations of Public Transportation Performance

It is important that a state or agency interested in evaluating public transportation performance establish the groundwork for conducting evaluations. Such efforts will improve the state or funding agency's effectiveness by: 1) enhancing its ability to develop an evaluation program, and 2) facilitating the timely implementation of evaluation procedures. The issues that should be addressed and activities that should be performed to establish the groundwork for conducting the evaluations include:

- o establishing the basis of authority to conduct performance evaluations;

- o defining the objectives for the evaluation and specifying the intended uses of evaluation results;
- o developing an evaluation methodology and evaluation process;
- o preparing for the implementation of the evaluation program; and
- o communicating the above information to the public transportation systems.

A detailed discussion of these activities follows.

It is critical for the agency initiating the evaluation program to first establish its basis of authority to evaluate performance and define the evaluation objectives and intended uses of evaluation results before an evaluation methodology is developed. These first two steps define the overall responsibilities of participants and the framework for developing the evaluation procedures.

With the initial groundwork established, the evaluation methodology and the evaluation process can be developed. The evaluation methodology and process are distinct in that the methodology includes the analytical techniques while the process specifies how the activities will be carried out in terms of the timing of activities, roles of participants, and related concerns associated with an ongoing evaluation program.

An evaluation methodology will be more readily accepted if its analytical techniques are straightforward and it does not impose substantial time requirements on the public transportation systems for data gathering and analysis. This can be facilitated by making maximum use of available information. Development of the evaluation process should: 1) consider the current and ongoing commitments of the systems, since an overly ambitious schedule is likely to be unachievable, and 2) include the opportunity for operator review and rebuttal.

Once the evaluation methodology and process are developed, a period of transition before implementation should be initiated. The objectives of the transition period are to:

- o allow for final testing and refinement of the evaluation methodology and process; and
- o ensure that all participants are trained and informed as appropriate.

The importance of this transition period should not be underestimated. A period of one year is a reasonable benchmark for conducting these activities.

Communication between the evaluator and the systems subject to evaluation may occur at each stage of the development, testing, and ultimate implementation of an evaluation program. However, the nature and frequency of communication will vary from area to area. In certain areas, some or all of the public transportation systems will be directly involved in decision making to develop and implement the evaluation program. In other areas, the communication with the systems may be more informational.

Regardless of the level of public transportation system involvement, lines of communication should be established so that system concerns and recommendations are considered and requested information is readily available. At a minimum, all systems that will be evaluated should be fully informed about the evaluation program before it is implemented.

Exhibit A summarizes important considerations for states or agencies including the timing of each of these five activities.

Public Transportation System Concerns and Perspectives Regarding Performance Evaluation

The concerns and perspectives of public transportation systems regarding the evaluation of their performance by states or other funding agencies will vary from system to system. In general, however, the following questions are likely to be raised:

- o How will the evaluation results be used?
- o Will the allocation of funding be affected by the results of the evaluations? If so, how?
- o What will the evaluations require of the public transportation systems in terms of staff and management time and data?
- o Who will conduct the evaluations?
- o What recourse does a system have if it disagrees with the evaluation conclusions?
- o What benefits can be expected from the evaluation results?

EXHIBIT A **ESTABLISH THE GROUNDWORK FOR CONDUCTING EVALUATIONS OF PUBLIC TRANSPORTATION PERFORMANCE**

ACTIVITIES	CONSIDERATIONS	TIMING
<p>Establish the Basis of Authority to Evaluate Public Transportation Performance</p>	<p>It is incumbent upon the organization initiating the evaluation program to establish its authority to evaluate. If the mandate for evaluation is not definitive (and therefore could be challenged), the basis of authority should be clarified, possibly through the preparation of a policy statement or administrative procedures. This may involve interaction with the executive and legislative branches of government, top management of the organization initiating the evaluation program, and the public transportation systems subject to evaluation.</p>	<p>Establishing the authority to evaluate is an important front-end activity for the development and implementation of an ongoing evaluation program. The time required to firmly establish authority to evaluate public transportation systems will vary according to how clear the mandate is and whether its authority is directly challenged.</p>
<p>Define the Objectives of the Evaluation and Intended Uses of Evaluation Results</p>	<p>The objectives of the evaluation and intended uses of evaluation results establish the framework for the methodology, i.e., they determine what the evaluations must accomplish. Consequently, it is important that considerable effort is taken to specify these concerns and communicate them to public transportation systems subject to evaluation, the individuals responsible for developing the evaluation procedures, and those responsible for carrying out the evaluations.</p>	<p>Defining evaluation objectives and the intended use of evaluation results is an important front-end activity that should precede the development of the evaluation methodology. These activities may require minimal time if the mandate for the evaluations is definitive. Otherwise, the time required can be substantial reflecting differences in opinion.</p>
<p>Develop an Evaluation Methodology and Evaluation Process</p>	<p>The evaluation methodology and the process are distinct in that the methodology is composed of analytical techniques and procedures while the process defines how the evaluations will be carried out. Important considerations in the development of the methodology are:</p> <ul style="list-style-type: none"> the analytical techniques should be straightforward and easily understood; substantial new data gathering should not be required; and existing requirements that produce potentially useful information should be reviewed to avoid redundancy and reduce staff requirements for data gathering and analysis. <p>Considerations in the development of the evaluation process include:</p> <ul style="list-style-type: none"> the role and responsibilities of participants throughout the evaluations; the timing of activities and overall time requirements to conduct the evaluations; and the need for internal controls and feedback to insure quality control. 	<p>The time required to develop an evaluation methodology and process will vary among areas. Time requirements will be affected by:</p> <ul style="list-style-type: none"> whether new procedures are being developed or existing procedures are being adapted; the diversity and number of public transportation systems being evaluated; the complexity of the evaluation objectives and intended uses of evaluation results; and the number of participants involved. <p>An overly ambitious schedule should not be planned for the development of the evaluation methodology and process.</p>

EXHIBIT A (Continued)

ACTIVITIES	CONSIDERATIONS	TIMING
Prepare for the Implementation of the Evaluation Program	<p>These activities serve as a transition from the development to the implementation of the evaluation program. Adequate testing and refinement of the evaluation methodology (i.e., analytical techniques) and the evaluation process (i.e., roles and responsibilities of participants, timing, etc.) In addition, there should be training by hands-on experience for the evaluators and detailed debriefing of the public transportation systems not yet familiar with the evaluation program.</p>	<p>These activities follow the development of the evaluation program and precede its full scale implementation. The amount of time required will be influenced by:</p> <ul style="list-style-type: none"> the number of systems effected by the evaluation program the familiarity of the evaluators and the systems with the evaluation objectives, procedures and uses of results; and the complexity of the evaluation methodology including data requirements. <p>A reasonable benchmark is one year.</p>
Communicate with Public Transportation Systems	<p>Communication with the Public Transportation systems that will be evaluated is important to the successful implementation of the evaluation program. The frequency and nature of communication with the systems will be determined, in part, by the role the operators play in the development of the evaluation program. The more integral the systems are in determining the objectives of the evaluations, uses or results, and procedures used, the more involved they will be. Regardless of the level of operator involvement, their concerns and recommendations should be considered and any requested information should be made readily available.</p>	<p>The timing and frequency of communication with the systems subject to evaluation will vary among areas developing and implementing transit evaluation programs. In some areas, some or all of the systems may be involved throughout the development and implementation activities. At a minimum, all systems that will be evaluated should be fully informed about the evaluation program before it is implemented.</p>

- o Is state or funding agency involvement in public transportation system management and operation exceeding established limits of authority and responsibility?
- o Are peer comparisons valid?
- o Are the proposed evaluation procedures redundant with current reporting or program monitoring activities for the system?

Simply stated, a primary concern of public transportation systems is how they may be affected by evaluations of their performance by an outside agency. Specifically, the systems are concerned about how the evaluations may affect:

- o financial resources;
- o staff resources;
- o control of management over internal system operations and decisionmaking; and
- o local officials' and the public's perceptions of the system and its management.

Each of these issues was raised by mid-size transit systems in Michigan and is discussed throughout this report. Similar issues arose in Pennsylvania and California when statewide performance evaluations were initiated.

Exhibit B summarizes the concerns of public transportation systems regarding their evaluation by an outside agency and presents the suggested response of the evaluator.

The conclusions of the Michigan experience with regard to the concerns and perspectives of public transportation systems are that:

- o It is the responsibility of the evaluator to promote goodwill. Consequently, the evaluation program should focus on service improvement rather than penalty and equal effort should be given to identifying the progress and strengths of each system as well as opportunities to improve.
- o The potential effects of an evaluation program on financing should be determined at the earliest possible date and communicated to the systems so that they can avoid a loss of funds.

EXHIBIT B
CONCERNS AND PERSPECTIVES OF
PUBLIC TRANSPORTATION SYSTEMS

OPERATOR'S CONCERNS	ISSUES	EVALUATOR'S ROLE
<p>The Potential Effect of Evaluations on the Financial Resources of the Public Transportation System</p> <p>The Potential Effect of Evaluation on Staff Resources</p> <p>The Potential Effect of Evaluation on the Control of Public Transportation Management Over System Operations and Decision Making</p> <p>The Potential Effect of Evaluation on the Public Transportation System and its Management</p>	<p>Probably the greatest single concern of public transportation systems is that performance evaluations may lead to loss or restrictions in use of funds necessary for their continued operation.</p> <p>Public transportation systems are concerned that conducting evaluations will require extensive use of their staff resources who are committed to activities required to manage, operate and maintain services.</p> <p>The involvement of states or other outside funding agencies in performance evaluations that can lead to recommendations for management action can be viewed as an extension into the internal management of the system. This traditionally has been outside their purview as most states and other funding agencies are not prepared to become extensively involved in ongoing system management.</p> <p>Public transportation systems are concerned that evaluations are intended to uncover problems or make them look bad. This perception is counterproductive and limits the potential benefits of the evaluations.</p>	<p>Potential effects of an evaluation program on public transportation system financing should be determined at the earliest possible date and communicated to the systems so that they can avoid loss of funds. To the extent possible, the evaluation program should focus on service improvement and accountability, not penalty.</p> <p>The evaluation procedures should make maximum use of available information, avoid redundant requirements, and minimize time demands on system personnel.</p> <p>Evaluations should not over extend themselves into public transportation system management. The authority to evaluate should not interfere with the authority and responsibility of system management.</p> <p>Equal effort should be given to identifying progress and strengths of a system as to opportunities for improvement. An environment of goodwill should be pursued by the evaluator.</p>

- o Time demands of the evaluation on public transportation system personnel should be minimized by making use of available information, avoiding redundant requirements, and simplifying evaluation procedures.
- o Evaluations should generally not extend the role of the evaluator into day-to-day management activities. The authority and responsibilities of the evaluator should not interfere with or impede the authority and responsibilities of public transportation system management.

CONCLUSION

The experience gained in Michigan in the development of a performance evaluation program for public transportation is presented to assist others to develop their program more effectively and expeditiously. UPTRAN's project to develop an evaluation methodology for its mid-size transit systems lends important documentation for use by the growing number of states, other funding agencies, and others interested in considering performance evaluation programs.

The Michigan experience confirms that the process for an outside agency to develop and implement an evaluation program is time-consuming and sensitive. Two important lessons were learned through the experience gained in Michigan. First, it is important that the groundwork for evaluations be carefully established. The development of an evaluation methodology represents only one of a series of important activities to establish this groundwork. Developing the methodology must be preceded by establishing 1) the authority to evaluate, 2) the objectives of the evaluation, and 3) the intended uses of evaluation results. Once developed, the evaluation methodology and process for its application must be tested and refined in conjunction with the public transportation systems that will be evaluated.

The second important lesson learned in Michigan is that the concerns and perspectives of the public transportation systems subject to evaluation must be recognized and considered. Throughout the development and implementation of an evaluation program, it is important that the organization initiating the evaluations communicate with the public transportation systems and is responsive to their concerns and perspectives.

I. INTRODUCTION

The objective of this report is to share the experience gained during the development of a performance evaluation methodology for public transportation in the State of Michigan. Including this Introduction, the report consists of seven sections and two appendices. Subsequent sections are described below:

- o Section II Background - provides information on the Bureau of Urban and Public Transportation (UPTRAN) and its mandate to evaluate public transportation in Michigan.
- o Section III Initiation of the Project to Develop an Evaluation Program for Mid-size Transit Systems - describes the objectives of the project, the selection of a consultant and the formation of the project steering committee.
- o Section IV Development and Testing of the Evaluation Methodology - provides a detailed review of each phase of the project, and the activities of each project steering committee meeting.
- o Section V Project to Test and Refine the Evaluation Methodology for Mid-size Transit Systems in Michigan - describes the initiation of the current project to conduct a statewide pilot test of the evaluation methodology (i.e., pilot test in each of the transit systems to be routinely evaluated) and refine the methodology with transit operator input.
- o Section VI Lessons Learned in the Development of the Evaluation Methodology for Mid-Size Transit Systems in Michigan - first describes the importance of establishing the groundwork for conducting evaluations and presents each of the major activities that should be addressed. It then discusses the key concerns and perspectives of public transportation systems with regard to performance evaluation and suggests the appropriate role of the evaluator in response to each concern.
- o Section VII Conclusion - briefly highlights the significance and key findings of this report.
- o Appendix A is a letter sent by UPTRAN to the transit operators and the steering committee members summarizing the results of the final meeting for the

Project to Develop and Test an Evaluation Methodology for Mid-Size Transit in Michigan.

- o Appendix B is an UPTRAN statement on Public Transportation System Evaluation.

II. BACKGROUND

This section of the report contains information on UPTRAN's program responsibilities and its mandate to evaluate public transportation. It provides a background for understanding the projects conducted by UPTRAN to initially develop and test and subsequently to further test and refine an evaluation methodology for public transportation in Michigan.

UPTRAN PROGRAM RESPONSIBILITIES

UPTRAN is responsible for the annual administration of the State Comprehensive Transportation Fund for the Michigan Public Transportation Program. The fund provides capital and operating grants, loans, and demonstration grants to the following seven public transportation modes in Michigan:

- o Local transit;
- o Interim Elderly and Handicapped and 16(b)(2) Transit;^{1/}
- o Rail passenger;
- o Rail freight;
- o Intercity bus;
- o Water transportation; and
- o Air commuter.

The evaluation program discussed in this report was developed for the local transit systems serving urbanized areas in Michigan with a population of at least 50,000, excluding the Southeastern Michigan Transportation Authority (SEMTA). Currently there are ten transit systems in Michigan in this group: Ann Arbor, Battle Creek, Bay County,

^{1/} This program provides vehicles and operating grants to local units of government in areas where public transportation is non-existent. In addition, the state pays the 20 percent matching share for all vehicles purchased through the federal 16(b)(2) program for senior citizens and the transportation handicapped and limited assistance to operate these vehicles.

Flint, Grand Rapids, Jackson, Kalamazoo, Lansing, Muskegon, and Saginaw.

Operating and capital assistance are provided by the state to all eligible Michigan bus systems operating in urbanized areas. Urbanized area bus systems other than SEMTA are allocated up to one third of their eligible operating expenses by formula. (SEMTA receives up to 21 percent of its operating expenses through state assistance.) Up to one hundred percent of the non-federal share of capital expenses (i.e., 20 percent of the total capital expenses) are paid through state grants.

UPTRAN's MANDATE TO EVALUATE PUBLIC TRANSPORTATION

Several bills and acts passed by the Michigan State Legislature during the fall of 1978 called for improved information from state agencies to demonstrate the efficiency and effectiveness of state funded transportation programs. Specifically:

- o Act No. 51, Section 10H(1)(b) requires the State Transportation Commission to prepare a progress report to the state legislature, Department of Management and Budget (DMB) and Auditor General each year by April 1 accounting for the use of state funds for transportation during the previous year; and
- o Act 468, an appropriation bill, requires each department or agency to furnish resource and performance data to demonstrate the efficiency and effectiveness of each program or project and if necessary to prepare a report explaining why anticipated levels of productivity cannot be met.

UPTRAN interpreted the legislation passed in 1978 as a mandate to 1) develop evaluation methodologies; 2) perform evaluations of the programs which receive funds from the State Comprehensive Transportation Fund; and 3) report evaluation findings for each of these public transportation programs. Acting on its interpretation of the 1978 legislation, UPTRAN planned to develop evaluation methodologies for use in all public transportation modes funded by the State Comprehensive Transportation Fund and to annually apply the methodologies and use the results of the evaluation as the basis for the annual report required by Act 51.

It is important to note that while the 1978 legislation indicated that the state should have information to ensure

accountability and to report on the efficiency, effectiveness and progress of state funded transportation programs, it did not explicitly stipulate that an evaluation of the public transportation programs by state agencies is required. It was UPTRAN's interpretation of the legislative acts that the state agencies must develop evaluation methodologies and, on an annual basis, evaluate the state funded public transportation programs to produce the information requested by the legislation. Representatives of the mid-size transit systems did not concur with this interpretation. They believed, in fact, that there was not a firm agreement among the legislators themselves on a clear interpretation of the legislation.

In May 1979, however, the annual report of UPTRAN activities prepared by the State Auditor General supported UPTRAN's interpretation of the state legislation. The report noted that the bureau (UPTRAN) had not developed criteria and methods to evaluate the performance and effectiveness of bus transportation systems. The report recommended that the Department: 1) develop criteria and methods to determine if state gas taxes are used to operate efficient and effective public transportation systems; and 2) in cooperation with the agencies and authorities develop uniform policies and methods to manage and control the operating costs of bus transportation systems and routes.

The May 1979 State Auditor's report, a statement by Governor Milliken outlining the Governor's Budget Development Policy for 1980-81^{1/} and the state legislation passed in 1978, have regularly been cited by UPTRAN as the basis of UPTRAN's mandate to develop evaluation methodologies, routinely evaluate public transportation program performance, and annually report to the State Legislature, DMB and the State Auditor General on the efficiency, effectiveness and progress of the state-funded public transportation programs.

^{1/} The Governor's Budget Development Policy Statement for 1980-81 called for greater accountability, emphasized program efficiency and effectiveness, and stressed the importance of improved information to facilitate enlightened decision-making by the Michigan State Legislature and citizens.

III. INITIATION OF THE PROJECT TO DEVELOP AN EVALUATION PROGRAM FOR MID-SIZE TRANSIT SYSTEMS

In the fall of 1978 UPTRAN initiated a project to develop an evaluation program for the mid-size^{1/} local transit systems in Michigan which receive formula operating assistance for up to one-third of their eligible operating expenses. This project was to be the first step in carrying out UPTRAN's plan to develop methodologies and annually evaluate each of the public transportation modes that are supported by the State Comprehensive Transportation Fund.

The objectives of the UPTRAN project were to develop and test an evaluation methodology for the mid-size local transit systems, and train UPTRAN staff in its application and use. This was to be accomplished in one year (largely the 1979 calendar year), with the intent that UPTRAN would apply the methodology "live" in the following year.

During the inception of the project, there was considerable enthusiasm within UPTRAN regarding potential applications of the evaluation results both by the state and local governments. In particular, although it was not an objective of the project, the Research and Evaluation Section of UPTRAN (which conducted the project) assumed that by April 1, 1980, the annual report required by Act 51 would be based, in part, on the results of the first state-wide evaluation of Michigan mid-size transit systems.

The Research and Evaluation Section of UPTRAN, which prepares the annual report, viewed the future availability of the annual evaluation results as an opportunity to improve the quality and usefulness of the reports and the responsiveness of UPTRAN to Act 51. By including the evaluation results, the reports could more thoroughly address the efficiency, effectiveness and progress of the transportation programs.

SELECTION OF A CONSULTANT

Through a competitive procurement, which included the preparation of a written proposal and an oral presentation,

^{1/} These bus systems are commonly referred to as the mid-size systems since they are smaller than SEMTA and larger than the smaller urban and rural systems.

a contractor was selected to assist UPTRAN to develop and test an evaluation methodology for the mid-size transit systems in Michigan.

The request for proposal (RFP), dated September 22, 1978, stated that the objectives of the study were to:

- o develop a methodology for evaluating the performance of urban transit systems in Michigan based on joint state-local perspectives;
- o train department staff in the application of the methodology and in disseminating the methodology to other transportation evaluation staffs in Michigan; and
- o apply the methodology in a pilot evaluation of a public transportation system to be selected jointly by the Bus Transport Division of the Bureau of Public Transportation and the Michigan Public Transit Association.

The RFP also stated that application of the methodology should annually provide information useful to the state, transit systems management and elected officials in the area. To assure that state and local objectives would be met, the RFP specified that the methodology would be developed in consultation with Department (UPTRAN) staff, local government officials from the pilot area and the MPTA.

Exhibit 1 presents an overview of the selected contractor's proposed work plan and schedule.

FORMATION OF THE PROJECT STEERING COMMITTEE

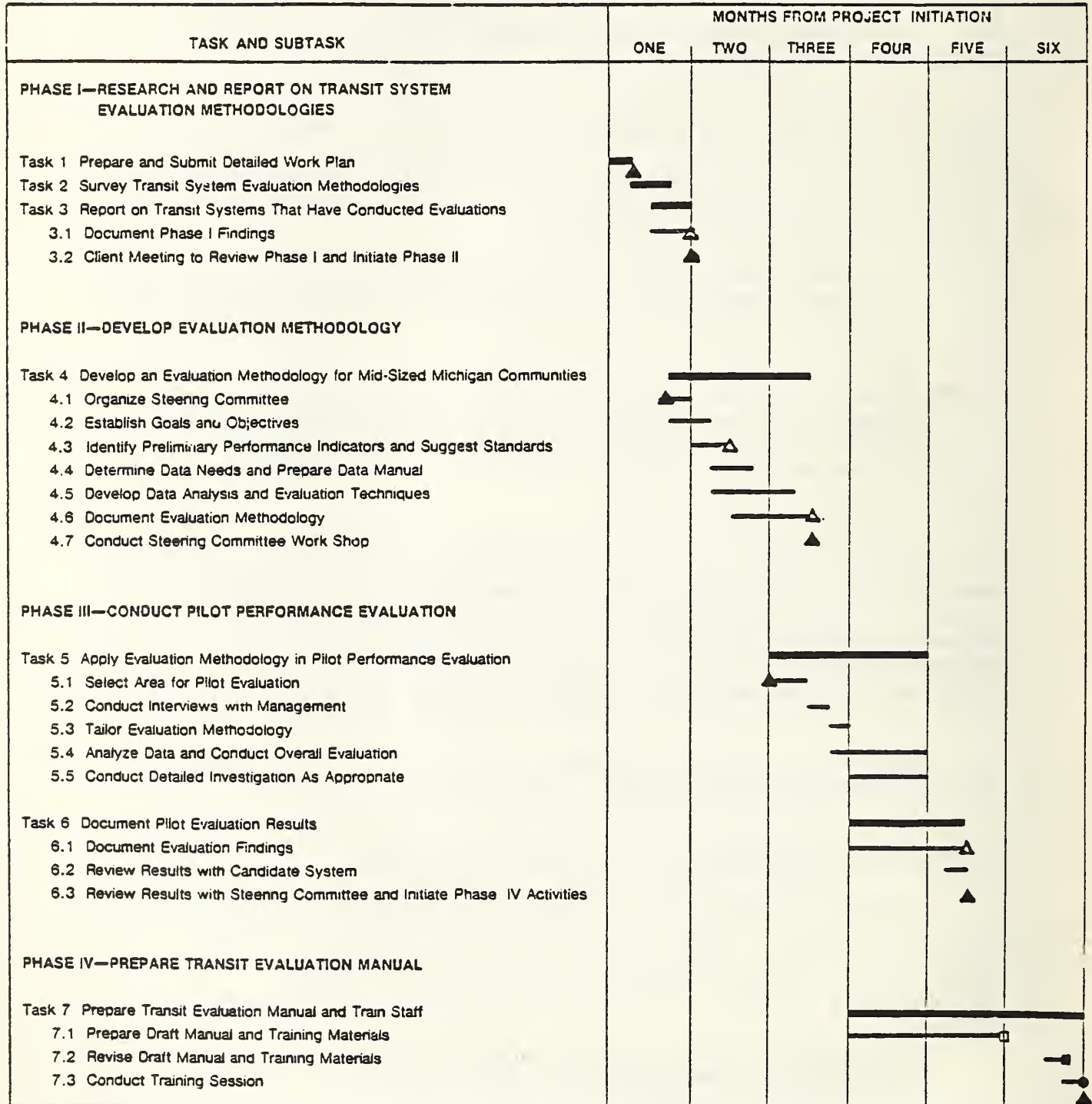
As part of the project, UPTRAN suggested the composition of a project steering committee and suggested that formation of the committee be included in Phase I rather than Phase II of the project as initially proposed. This was the only change to the proposed work plan requested by UPTRAN.

The steering committee included representatives from:

- o the UPTRAN Bus Transport Division;

EXHIBIT 1

DEVELOP AND TEST AN EVALUATION METHODOLOGY FOR MID-SIZE TRANSIT SYSTEMS IN MICHIGAN PROPOSED PROJECT SCHEDULE



Key:

- ▲ scheduled project meetings
- draft final report
- final report
- project completion date
- ▲ interim project reports

- o the SEMTA Budget Division;1/
- o the Michigan Public Transit Association (MPTA);
- o the MDOT Interagency Transportation Coordinating Committee;
- o an advocate for the transportation handicapped;
- o the Southeast Michigan Council of Governments (SEMCOG):1/
- o the City of Lansing Planning Department;
- o the MDOT Planning Department;
- o the Tri-County Regional Planning Commission; and
- o the Michigan Department of Management and Budget.

The representative of the MPTA on the project steering committee served to represent all of the mid-size transit systems. UPTRAN had originally contacted the Capital Area Transportation Authority (CATA) requesting its participation on the committee. The invitation was declined and UPTRAN was informed that the MPTA could serve as representative for the transit systems.

1/ A representative from the SEMTA Budget Division and SEMCOG were included in the project steering committee even though they are not from an area in Michigan with a mid-size transit system because of their expertise and interest in transit financial reporting and transit analysis and planning, respectively.

IV. DEVELOPMENT AND TESTING OF THE EVALUATION METHODOLOGY

The project to develop and test an evaluation methodology for mid-size transit systems in Michigan was conducted in four phases.

- o Phase I included research of prior experience of transit system evaluation methodologies.
- o Phase II involved developing an evaluation methodology based on Phase I research and the requirements for evaluation in Michigan established by the Michigan legislature and UPTRAN.
- o Phase III included a pilot application of the methodology.
- o Phase IV involved documenting the methodology and pilot application results as well as producing a manual which defined the data routinely used in the evaluations.

The activities in each phase including product development and the outcome of the project steering committee meetings are discussed below.

PHASE I - RESEARCH AND REPORT ON TRANSIT SYSTEM EVALUATION METHODOLOGIES

The first phase, initiated on February 15, 1979 and conducted during the first six weeks of the project, involved a state of the art review of methodologies used to evaluate transit systems. A report documenting Phase I results was prepared and distributed to the project steering committee members prior to the first steering committee meeting.

The first section of the report discussed (1) why transit performance evaluations are conducted, (2) common objectives of transit evaluation results, and (3) the situation in Michigan that initiated interest in performance evaluation. The discussion of the Michigan situation largely reviewed the legislation passed in 1978 by the Michigan State Legislature.

The second section of the report discussed current experience with transit performance evaluation. The last two sections of the report outlined a process for developing

a performance evaluation methodology and presented a preliminary framework for public transportation performance evaluation in the State of Michigan.

First Project Steering Committee Meeting

The first project steering committee meeting was held in early April, 1979. The objectives of the meeting were to:

- o review the objectives, approach, and schedule for the study;
- o review Phase I findings;
- o establish goals and objectives for the evaluation methodology for the mid-size transit systems in Michigan;
- o discuss a suggested evaluation approach;
- o review recommended performance indicators;
- o discuss a data needs manual (which would be used to develop performance indicators);
- o introduce suggested data analysis techniques; and
- o identify candidate transit systems for the pilot evaluation.

During the meeting the discussion focused largely on the use of the evaluation results, particularly their potential use in the allocation of financial resources, and the responsibilities of UPTRAN in relation to the public transportation systems.

More specifically, the major issues raised by the steering committee members included:

- o a discussion of whether UPTRAN intended to develop standards for performance which might conflict with local goals and objectives;
- o a clarification of UPTRAN's role regarding whether it was to serve as a pass through agency, distributing earmarked funds, or as monitor or watch dog; and

- o an objection that was raised to comparing public transportation systems as part of the evaluation.

In response to the first issue, UPTRAN stated that it would not mandate the achievement of prescribed standards for public transportation performance in the state.

In response to the second issue, UPTRAN's authority to evaluate program performance was discussed and acknowledged. UPTRAN stated that while operating assistance to local bus systems in Michigan is allocated by formula (established by the state legislature and therefore passed through UPTRAN to the transit systems), UPTRAN has the authority to assess and report on the efficiency, effectiveness, and progress of the recipients of these funds. In addition, UPTRAN is responsible for the allocation of state funds, other than operating assistance, including capital and demonstration grants. UPTRAN stated that it believed it was important to use all available information to prioritize these grants within and among the eligible systems.

The third issue was raised by the representative of the MPTA who stated that the transit systems in Michigan are each unique and therefore cannot be meaningfully compared. In response to this comment, there was a discussion about the usefulness of comparisons as a diagnostic tool for information gathering. It was generally agreed that while peer comparisons must be carefully conducted, recognizing the differences among transit systems, they can produce information which is informative and useful in a preliminary or diagnostic analysis of performance. This discussion was significant since the proposed evaluation approach includes a diagnostic phase which utilizes both peer comparisons and time series analysis of performance indicators to identify selected areas for more detailed review in each transit system.

Overall the steering committee agreed with the initial concepts for the evaluation approach and the recommended use of performance indicators. The concerns about the study did not address the technical merit of the suggested evaluation approach or the necessity for public accountability. Rather, the concerns focused on the potential increased involvement of the state in the provision of local transit services, the threat of reduced funding or changes to funding allocation policies and the potential misrepresentation of transit systems as a result of comparing system performance.

PHASE II - DEVELOP EVALUATION METHODOLOGY

The second phase of the study involved development of the evaluation procedures and the preparation of a draft Data Needs Manual. Development of the evaluation procedures involved refining the approach and analytical techniques outlined in the first project steering committee meeting and making the procedures more detailed.

The draft evaluation methodology developed for the mid-size transit systems in Michigan included a two-phased procedure for evaluating each of the transit systems. Exhibit 2 provides an overview of the procedure as developed in the second phase of the study.

The first phase of the methodology involves a diagnostic review of a set of performance indicators which measure various aspects of transit system efficiency and effectiveness. The indicators from each mid-size transit system in Michigan are compared across transit systems and over time. Indicators with values that are significantly higher or lower than those in the other systems and those that are changing significant overtime are identified. These indicators are then reviewed in preparation for the second, more detailed, phase of the evaluation.

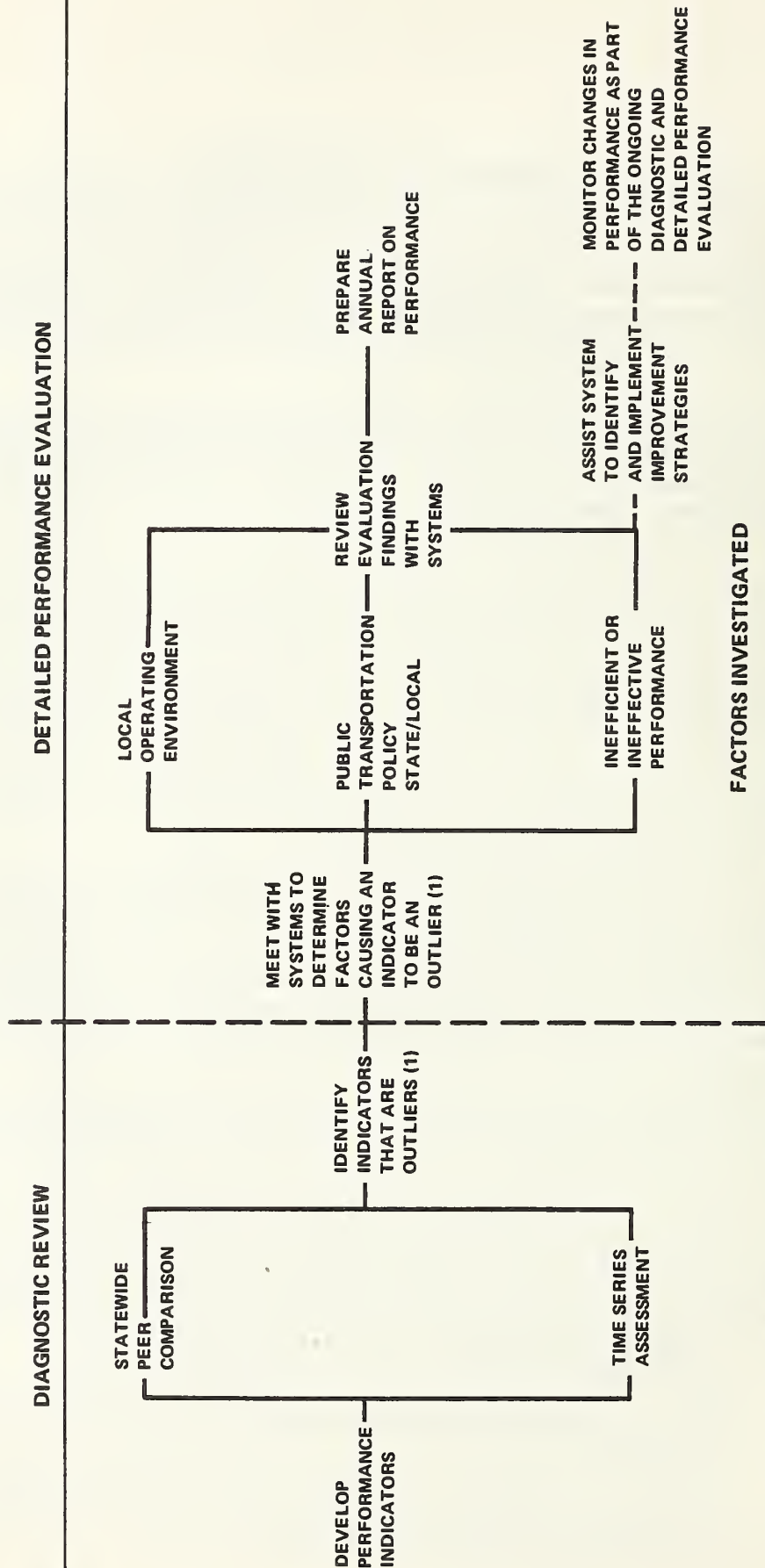
The primary objectives of the first phase of the evaluation are to conduct a preliminary review of each System and to limit the scope of the more detailed reviews. By focusing on the attributes of each transit system that suggest the need for more in-depth analysis, the scope of the evaluations and resources required to conduct them can be limited.

The second phase of the evaluation procedure is more investigative. Through direct contact with the transit operators, information is gathered about the local operating environment of the transit system, the effects of state and local policy on performance, and the management and operating procedures within the transit system. Information gathering is focused on attributes of the transit system suggested by the indicators identified in the diagnostic phase of the evaluation. The information gathered in this second phase of the evaluation is intended to:

- o provide information and explain performance characteristics;
- o identify examples of innovative or exemplary performance that may be shared among the local transit systems in Michigan;

EXHIBIT 2

OVERVIEW OF THE DRAFT EVALUATION METHODOLOGY



(1) "Outlier" is the term used in the evaluation methodology to describe performance indicator values that are significantly higher or lower than those in other systems and those that are changing significantly over time.

- o suggest the need for further study; and
- o identify opportunities for improvement and potentially recommend solutions.

This information serves as the basis for monitoring performance overtime and annually assessing the efficiency, effectiveness and progress of each transit system.

A Data Needs Manual was developed in conjunction with the evaluation procedures. The Data Needs Manual defines each performance indicator included in the diagnostic phase of the methodology and explains how each indicator is developed. With the exception of several indicators which include demographic data (available from UPTRAN), the performance indicators are composed from financial and operating statistics included in the (required level) Section 15 reporting requirements developed in the Urban Mass Transportation Administration (UMTA) of the U.S. Department of Transportation. Section 15 data is routinely reported by the transit operators to the federal government each fiscal year. A preliminary draft of the Data Needs Manual was distributed to the Steering Committee Members in advance of the second project Steering Committee Meeting.

Second Project Steering Committee Meeting

The second project Steering Committee meeting was held on April 25, 1979. The objectives of this meeting were to:

- o review the evaluation approach;
- o present the Data Needs Manual;
- o discuss the diagnostic element of the evaluation methodology;
- o discuss the detailed evaluation element of the evaluation methodology; and
- o discuss the pilot upcoming evaluation.

During the meeting, the format of the Data Needs Manual and the performance indicators included in the methodology were presented and discussed in detail. The presentation included an explanation of the logic behind including each indicator and the structure within which the indicators are to be used in the diagnostic phase of the methodology.

The framework for both phases of the evaluation methodology were presented first in overview and then in detail. The merits of the methodology were discussed including:

- o the methodology does not impose excessive reporting burden on transit operators;
- o a staged (two phase) evaluation process is cost effective because it focuses the evaluation and limits the scope of analysis;
- o the state gains a greater understanding of the operating environment and policies of the mid-size transit systems in Michigan; and
- o the methodology focuses on improvements in public transportation system efficiency and effectiveness.

This meeting also included a preliminary discussion about the pilot test of the performance evaluation methodology. Suggested objectives for the pilot test discussed in this meeting included:

- o testing alternative analytical methods for conducting the diagnostic phase;
- o adding more detail to the procedures for the second phase of the evaluation methodology; and
- o refining the methodology based on information gained through the pilot test.

One of the mid-size transit systems in Michigan volunteered to participate in the pilot test. Coincidentally, this was the only transit system in Michigan to have completed its first annual UMTA Section 15 report at that time.

It was decided at the same time that the pilot test would include data to allow both time series and peer comparison analysis. The time series analysis would be performed on the data from the Michigan transit system which had volunteered for the pilot test. The data used in this analysis would be a combination of the first annual Section 15 report (1978 data), quarterly statistics historically

required by UPTRAN,^{1/} and other data from the transit system. The peer comparison would be based on Section 15 data from the Michigan Transit System that volunteered for the pilot test together with Section 15 data provided by UMTA for 13 other transit systems with less than 100 revenue vehicles.

Unlike the first Steering Committee meeting in which policy issues were debated, including UPTRAN's authority to evaluate the transit systems and the use of evaluation results, this meeting did not include such discussion. The Steering Committee Members were supportive of the information presented and did not request that the study be modified in scope or focus.

PHASE III - CONDUCT PILOT PERFORMANCE EVALUATION

This phase of the study involved performing the final preparation for and conducting the pilot test of the evaluation methodology and reviewing and documenting the pilot test results. Two steering committee meetings were held during this phase. One of the steering committee meetings preceded the pilot test and one was held shortly after it was completed.

Third Project Steering Committee Meeting

The third project Steering Committee Meeting was held in early June 1979, at the mid-point of the six month study. This meeting served to (1) review the accomplishments of the study to date and the remaining project activities and schedule, and (2) discuss the plans for the pilot test. Exhibit 3 was presented to discuss the project timing and activities.

Refined objectives for the pilot test were presented, these included:

- o applying and testing the performance evaluation methodology;

^{1/} Transit systems receiving state assistance in Michigan were required to submit quarterly reports to UPTRAN including operating and financial data between 1972 and 1978. These reports were replaced by the UMTA Section 15 reports through an act of the State Legislature in November 1978.

EXHIBIT 3

TIMING OF ACTIVITIES FOR PILOT APPLICATION AND REMAINDER OF THIS PROJECT

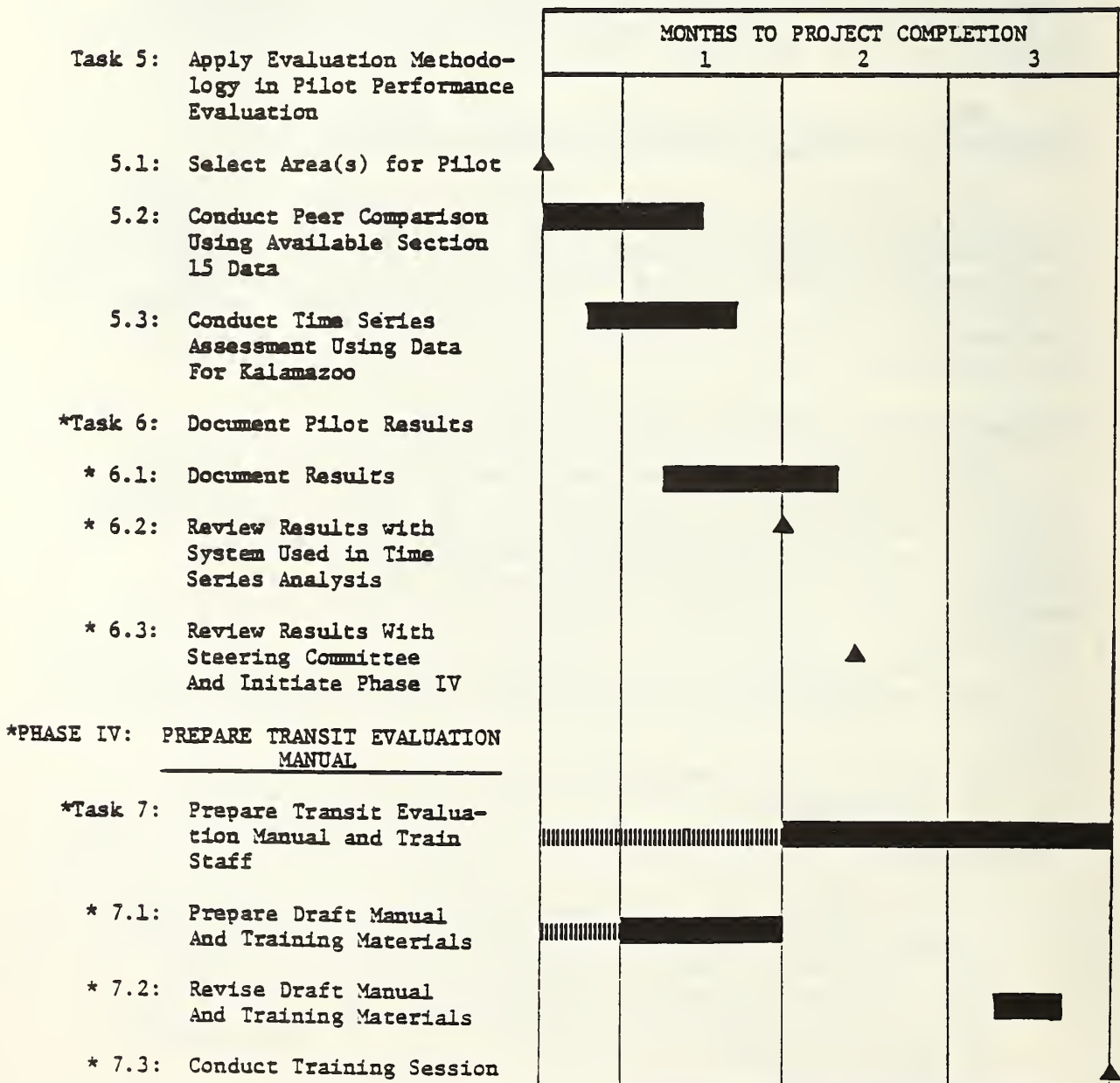
PHASE I: RESEARCH AND REPORT ON TRANSIT SYSTEM EVALUATION METHODOLOGIES

Complete

PHASE II: DEVELOP EVALUATION METHODOLOGY (AND DATA NEEDS MANUAL)

Complete

PHASE III: CONDUCT PILOT PERFORMANCE EVALUATION



* Task and Subtask Unchanged from Proposal
Tentative Meeting Schedule

- o assessing the methodology in terms of its ease of implementation, the time required to produce and assess information and the clarity of results;
- o illustrating the use of data in the development of the performance indicators;
- o examining the use and implication of various approaches for identifying indicators in the diagnostic phase for more detailed analysis through peer comparison and time series analysis; and
- o exploring the range of explanations for differences among transit systems.

The planned approach for conducting the pilot test was presented at this meeting including a review of data available within Michigan and from transit systems outside Michigan that could be used in the test. Since no objections were raised, or modifications proposed, the pilot test was subsequently conducted as planned.

Pilot Test Procedure and Findings

The pilot test included both a peer comparison and time series analysis. The first phase of the peer comparison included identifying performance indicators one and two standard deviations above and below the mean value for each indicator. These indicators were investigated in greater detail in the second phase of the peer comparison. The transit systems were contacted in the second phase by telephone and the factors affecting the values of selected performance indicators were discussed.

In all instances, explanations were available from the transit operators to explain the values of the performance indicators. In some instances, the operator explained that the data quality was suspect; these data were eliminated from further analysis and methods to improve data quality were discussed. In most instances, however, explanations such as the following were provided:

- o the values of maintenance and materials and supplies related indicators were high because a major vehicle overhaul program had been conducted in 1978;
- o the values of indicators reflecting wage rates were higher in the northern and northeastern transit systems because of regional wage rates;

- o the value of indicators measuring fringe benefits were extremely low in a transit system which used all non-union part-time labor to minimize its benefit package;
- o the value of indicators for fare revenue were low and state and local support high for a transit system that operated as a publicly supported, largely free fare service; and
- o the value of an indicator which measures driver utilization was low reportedly because the recent labor contract established a liberal sick leave policy which was believed to be directly related to the 94 percent increase in sick leave between 1977 and 1978.

In general, using the performance indicators as the basis for discussing performance was found to be both easy and informative, even though discussions were conducted exclusively by telephone.

The time series analysis was conducted by first identifying all performance indicators that had changed significantly over time for the Michigan transit system. These indicators were reviewed and questions developed about factors that might have affected indicator values. A site visit was then arranged with the transit system. Since an objective of the test was to review the usefulness of the indicators included in the methodology, the values of all of the performance indicators were reviewed with this transit operator rather than only discussing those indicators identified for more detailed analysis in the diagnostic phase.

Interviews were conducted with the acting and previous general manager, the maintenance supervisor, several administrative personnel and the transit system auditors during approximately three days. All of the questions raised in the interviews could not be answered because 1) there had been a complete turnover of supervisory and management personnel of the transit system during the three years covered by the analysis and 2) the quality of some of the data from 1976 and 1977 was considered suspect by the transit system. It was generally concluded that in the future, when data reporting is more routine, the analysis would be less time consuming, and easier to complete.

The results of the pilot test including its objectives, procedures and findings were documented after the pilot test was completed.

Fourth Project Steering Committee Meeting

This meeting was held in midsummer of 1979. The objectives of this meeting were to:

- o review and discuss the pilot application of the performance evaluation methodology for the mid-size transit system in Michigan; and
- o initiate Phase IV: Documentation of the Performance Evaluation Manual.

The presentation regarding the pilot test of the methodology included a discussion about the:

- o objectives of the pilot evaluation;
- o pilot evaluation overview;
- o pilot peer comparison: procedures and findings;
- o pilot time series assessment: procedures and findings;
- o differences between the pilot and future applications of the methodology;
- o conclusions from the pilot evaluation including suggested refinements to the methodology and apparent strengths and limitations.

The discussion about evaluation findings focused on the relative ease of gathering information and on the various factors reported to have influenced transit system performance. Suggested differences between the pilot and future applications of the performance evaluation methodology were also discussed including:

- o UMTA Section 15 reports should be complete and more accurate;
- o the evaluation process will become more routine;
- o evaluations should focus more on monitoring service, sharing information and identifying service improvements;
- o additional documentation and data will be available;

- o the identification of performance indicators for detailed review may be modified to reduce or expand the scope of the evaluations; and
- o gradual refinements may be introduced to meet future needs of transit systems and the state.

Neither of the meetings held in this phase of the project were well attended. Those who did attend appeared to find the material presented informative and were generally supportive of the study's progress.

PHASE IV - PREPARE TRANSIT EVALUATION MANUAL

During August 1979, a draft final report of the "Evaluation Manual for Mid-Size Transit Systems in the State of Michigan" was prepared. The draft manual included four sections outlined in Exhibit 4.

The draft final report of the Evaluation Manual for Mid-Size Transit Systems in the State of Michigan and the draft Data Needs Manual, prepared in Phase II of the study, were distributed in early September 1979 to the project steering committee members, the ten mid-size transit systems in Michigan, and the UMTA regional representative responsible for transit activities in the State of Michigan. After a 3-week review period, a meeting was held with all recipients of the draft evaluation methodology to discuss the proposed procedures and their anticipated application by the State.

Final Project Steering Committee Meeting

The final project steering committee meeting for the project to develop and test an evaluation methodology for mid-size transit systems in Michigan was held October 30, 1979. (This meeting included the project steering committee members and the other recipients of the draft Evaluation and Data Needs manuals.)

The objectives of this meeting were to:

- o review the objectives and activities of the project to Develop and Test an Evaluation Methodology for Mid-size Transit Systems in Michigan;
- o present the evaluation methodology: the objectives, procedure and format of results;

OUTLINE OF THE DRAFT EVALUATION MANUAL

I Introduction

Legislative Mandate

Objectives of the Evaluation Manual

II Description of the Performance Evaluation Methodology

The Evaluation Methodology: Overview and Intent of Activities

Peer and Time Series Comparison of Transit Performance: Current Concerns

Performance Indicators Developed for This Methodology

III Guidelines for Conducting a Diagnostic Evaluation of Transit Performance

Collect Data

List the Absolute Value of All Data

Develop the Performance Indicators

Screen and Validate the Performance Indicators

Calculate the Range, Mean, and Standard Deviation of the Current

Year and the Percent Change Since the Previous Year for each

Indicator

Identify Performance Indicators that Appear to be Outliers

IV Guidelines for Conducting a Detailed Evaluation of Transit Performance

Prepare for Site Visit(s) with Each Transit Operator

Conduct Site Visit(s) with Each Transit System

Document the Detailed Evaluation Findings

The draft manual also included three appendices:

Appendix A - Phase I Findings: Research and Report on Transit System

Evaluation Methodologies

Appendix B - Pilot Application Results of the Performance Evaluation

Methodology for Mid-Size Transit Systems in Michigan

Appendix C - Suggested Inquiries and Issues for Discussion with Transit

Operators for the Performance Indicators in the Evaluation
Methodology.

- o present the evaluation methodology: the objectives, procedure and format of results;
- o discuss the results of the pilot application of the methodology;
- o discuss the benefits of the evaluation program; and
- o conclude with an open discussion and question and answer session.

During the meeting, representatives of UPTRAN presented material summarizing the basis of the department's authority to conduct evaluations. This included citations of recent legislation, references to recent statements made by Governor Milliken, and excerpts from the May 1979 report from the State Auditor General.

Similar to the first project steering committee meeting the discussion in this meeting was concerned largely with policy issues. Several of the transit operators were active in the discussions. Specifically, these operators still questioned the State's authority to evaluate their performance, and expressed dissatisfaction with the use of peer comparison as part of the initial diagnostic phase of the evaluation procedures.

The operators suggested that the methodology exclude peer comparison and include only the time series self assessment element of the diagnostic phase. In support of this recommendation, the operators discussed the benefits of self analysis over time in light of the uniqueness of each system and the drawbacks of peer comparisons. In response to this suggestion UPTRAN reviewed the potential benefits of peer comparison as a diagnostic tool and suggested further analysis of the diagnostic phase of the methodology focusing on the benefits and limitations of peer comparisons.

Additional concerns raised at the meeting reflected the transit operators' interest in more extensive involvement in the evaluation efforts. At the conclusion of the meeting, the operators were asked to participate on the project steering committee of the proposed upcoming project to refine and implement the evaluation procedures. Two transit operators volunteered to serve on the committee.

Following the meeting, a letter was sent to everyone invited to the meeting. The letter summarized the meeting's results; stated UPTRAN's objectives in conducting evaluations, in general and those specific to transit; enumerated

the intended use of evaluation results; and cited the basis of UPTRAN's mandate to conduct performance evaluations. (See Appendix A.)

This meeting marked the end of the project to Develop and Test an Evaluation Methodology for Mid-size Transit Systems in Michigan. Because no substantive comments were received on the draft Evaluation and Data Needs Manuals, the manuals were not revised and finalized. It was assumed that revisions would be made during the next project in which the methodology was to be refined and implemented.

V. PROJECT TO: TEST AND REFINE THE EVALUATION
METHODOLOGY FOR MID-SIZE TRANSIT SYSTEMS IN MICHIGAN

Following the final project steering committee meeting for the project to Develop and Test an Evaluation Methodology for the Mid-Size Transit Systems in Michigan (October 30, 1979), a work plan was developed for UPTRAN to refine and implement the methodology. The work plan was circulated to the steering committee and subsequently approved by UPTRAN. In February 1980 the first steering committee meeting for this next project was held. This committee included two new representatives of transit systems in Michigan in addition to the members from the previous project's committee.^{1/}

FIRST PROJECT STEERING COMMITTEE MEETING

During this meeting, the transit operators on the project steering committee again challenged UPTRAN's authority to conduct and report on performance evaluations of the transit systems. The operators were particularly concerned about including the results of the performance evaluations in the annual report to the State Legislature. In addition, objections were raised regarding UPTRAN's plan to formally institute the evaluation methodology in the upcoming year. The transit operators stated that final implementation should not occur until the methodology was pilot tested statewide (i.e., in all ten of the mid-size transit systems in Michigan) and further refined. Refinement of the evaluation procedures would be based on the results of the statewide pilot test including the input of the transit operators. Finally, it was suggested that the evaluation procedures should be more directly beneficial to the transit systems as a management tool for self-evaluation.

In summary, the key concerns of the transit operator representatives raised at the meeting were that:

- o the authority of UPTRAN to evaluate public transportation performance should be further clarified possibly through direct inquiry to the state legislature;

^{1/} One of the members from the previous project's steering committee had changed employment from Tri-County Planning Commission to Capital Area Transportation Authority, Lansing, Michigan. Therefore, the new project steering committee included three transit operator representatives in addition to the representative from the MPTA.

- o the format and content of any report developed in whole or part from the results of the evaluations be developed in conjunction with the transit operators and subject to their review before it would be distributed (in particular to the Michigan State Legislature);
- o a state-wide pilot test of the evaluation methodology should be conducted. An objective of this test would be the critical review of the usefulness of information gathered through a peer comparison of the transit systems in Michigan; and
- o the products of this project more directly benefit the transit operators by providing a tool explicitly for self evaluation.

PROJECT WORK PLAN REVISIONS

In response to the concerns of the transit operators, UPTRAN altered its plans as to the way the evaluation procedures would be implemented. It was agreed that:

- o the evaluation methodology would be tested on a statewide basis (i.e., in each of the ten mid-size transit systems), and refined with the input of an expanded project steering committee and the results of the statewide pilot test;
- o a task would be included in the revised work plan to develop the draft format and suggested content of the report to the Michigan State Legislature on the performance and progress of the mid-size transit systems in Michigan. A preliminary draft report, for discussion purposes, would be developed early in the project so that each element of the draft report could be reviewed, modified, developed in more detail, or eliminated during the remainder of the project; and
- o a manual for transit self-evaluation would be developed for the use and benefit of the mid-size transit systems in Michigan. The methodology and techniques developed for UPTRAN (in the previous project) would be adapted and expanded to serve transit management by improving service monitoring and evaluation procedures.

The revised work plan for the project to Test and Refine the Evaluation Methodology for Mid-size Transit in Michigan, summarized in Exhibit 5, was prepared and approved by UPTRAN and the State of Michigan in August 1980. It is anticipated that this project will extend for 12 to 18 months. The statewide pilot test and the preparation of the self-evaluation manual should be completed by December 1981.

PHASE I: TRANSITION TO REFINEMENT AND STATEWIDE TESTING OF AN EVALUATION METHODOLOGY FOR MID-SIZE TRANSIT IN MICHIGAN

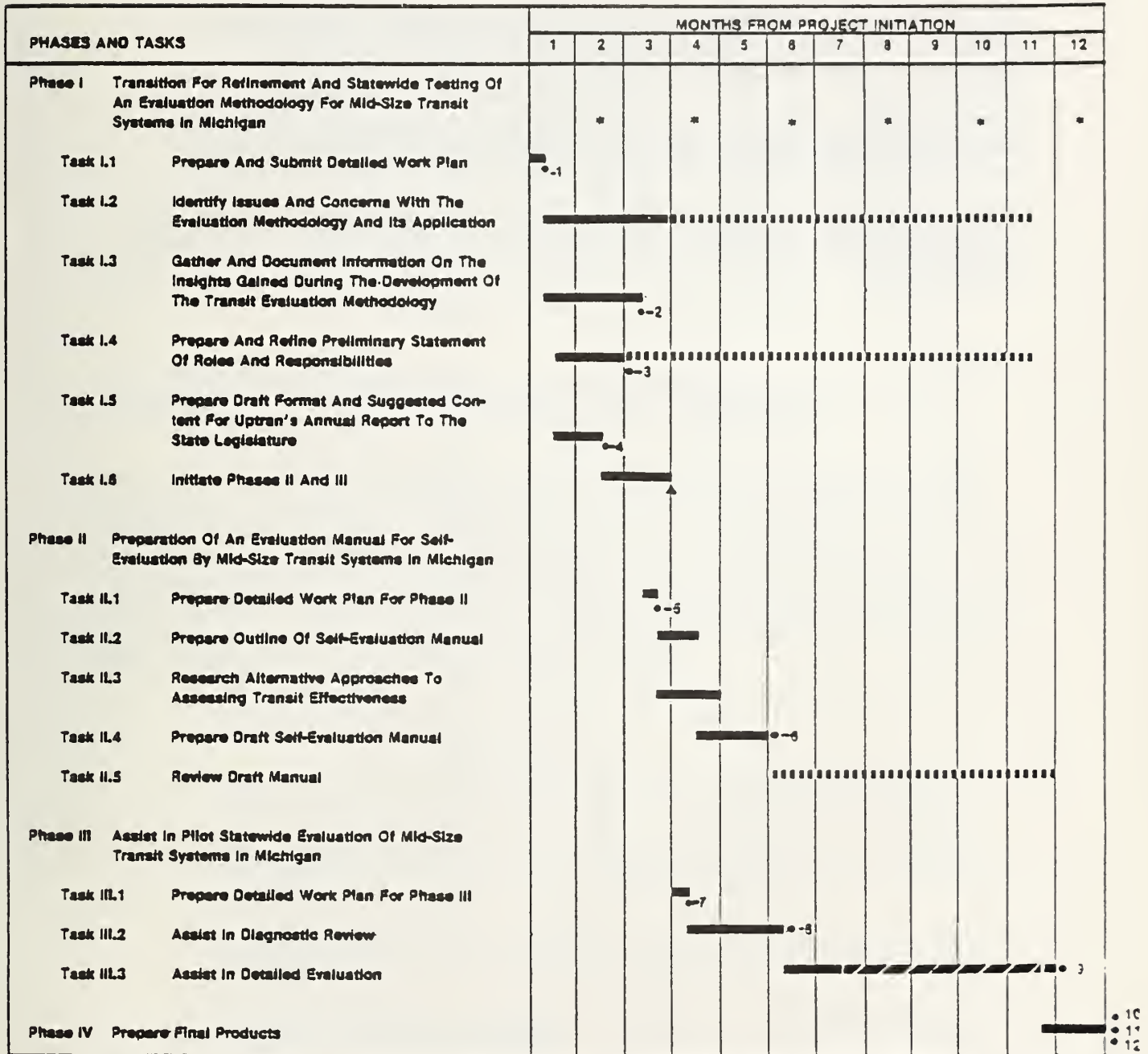
The first phase in the revised project to Test and Refine the Evaluation Methodology for the Mid-Size Transit Systems in Michigan was designed to serve as a transition from the initial project which had been completed in the fall of 1979 (in which the methodology was developed) to the current one. One of the first activities in the transition phase was to interview the steering committee members, focusing on transit system representatives. The primary area of discussion raised during these interviews related to the need for UPTRAN to prepare a formal policy statement in which it would state the objectives of the transit evaluations and the intended use of evaluation results. These concerns reflected the transit operator's interest in further clarifying UPTRAN's authority to evaluate their performance and defining the extent to which the evaluations may affect the transit systems' management and operating activities and finances.

In September 1980, a statement was prepared in response to the interview findings and to resolve past challenges to UPTRAN's authority posed at project meetings. This statement was distributed for review first within UPTRAN and then to the project steering committee members. (See Appendix B.) On November 3, 1980, the policy statement was discussed at a project steering committee meeting. The statement was generally accepted and challenges to UPTRAN's authority to evaluate public transportation performance have since subsided.

At this meeting, it was also decided that: 1) the development of the draft format and suggested content for the annual report to the Michigan legislature would be removed from the scope of the project, and 2) that the project would move forward as planned with the statewide pilot testing efforts and development of the self-evaluation manual.

While it was agreed that UPTRAN would continue to modify and improve its report to the legislature, members of

EXHIBIT 5 TEST AND REFINE THE EVALUATION METHODOLOGY FOR MID-SIZE TRANSIT IN MICHIGAN PRELIMINARY PROJECT SCHEDULE



* Bi-Monthly Steering Committee Meeting

▲ Seminar With All Mid-Size Transit Systems

■■■■ Continuing Activities Which Either Involve Ongoing Information Gathering To Refine A Product

■■■■ Activities In Which PMM&Co. Largely Provides Technical Assistance

● Products For Delivery To Uptan Project Steering Committee And UMTA, As Appropriate

- 1 Detailed Work Plan Phase I
- 2 Report On Insights Gained In Methodology Development
- 3 Preliminary Statement Of Roles And Responsibilities
- 4 Draft Format And Content Of Uptan's Report To State
- 5 Detailed Work Plan Phase II
- 6 Draft Transit Self-Evaluation Manual
- 7 Detailed Work Plan Phase III
- 8 Summary Reports Of Statewide Pilot Diagnostic Review
- 9 Summary Reports Of Statewide Pilot Detailed Review
- 10 Final Evaluation Manual For Statewide Evaluation
- 11 Final Transit Self-Evaluation Manual
- 12 Suggested Format And Content For Uptan's Report To State

† Includes Revised Statement Of Roles And Responsibilities

the steering committee, in particular those representing the transit systems, believed that these activities should not be part of the project to Test and Refine the Evaluation Methodology. No detailed explanation was provided or pursued regarding why the development of the draft format and suggested content of the annual report to the state Legislature was being removed from the project scope.

Since this steering committee meeting, the project has moved forward, focusing largely on the statewide pilot test activities.

VI. LESSONS LEARNED IN THE DEVELOPMENT OF THE EVALUATION METHODOLOGY

Two major lessons were learned during the development of the evaluation methodology for mid-size transit systems in Michigan. First, there is a need to establish the groundwork for conducting evaluations of public transportation system performance. Second, the concerns and perspectives of the public transportation systems regarding performance evaluation must be addressed and integrated into the development and implementation of the evaluation program.

IMPORTANCE OF ESTABLISHING THE GROUNDWORK FOR CONDUCTING EVALUATIONS OF PUBLIC TRANSPORTATION PERFORMANCE

It is important that a state or agency interested in evaluating public transportation performance establish the groundwork for conducting evaluations. Such efforts will improve the state or funding agency's effectiveness by: 1) enhancing its ability to develop an evaluation program, and 2) facilitating the timely implementation of evaluation procedures. The issues that should be addressed and activities that should be performed to establish the groundwork for conducting the evaluations include:

- o establishing the basis of authority to conduct performance evaluations;
- o defining the objectives for the evaluation and specifying the intended use of evaluation results;
- o developing an evaluation methodology and evaluation process;
- o preparing for the implementation of the evaluation program; and
- o communicating the above information to the public transportation systems.

Exhibit 6 summarizes important considerations including the timing of each of these five activities. Each activity is described below in more detail, highlighting the experience within the State of Michigan.

EXHIBIT 6

ESTABLISH THE GROUNDWORK FOR CONDUCTIVE EVALUATIONS OF TRANSIT SYSTEM PERFORMANCE

ACTIVITIES	CONSIDERATIONS	TIMING
<p>Establish the Basis of Authority to Evaluate Transit System Performance</p> <p>Define the Objectives of the Evaluation and Intended Uses of Evaluation Results</p> <p>Develop an Evaluation Methodology and Evaluation Process</p>	<p>It is incumbent upon the organization initiating the evaluation program to establish its authority to evaluate. If the mandate for evaluation is not definitive (and therefore could be challenged), the basis of authority should be clarified, possibly through the preparation of a policy statement or administrative procedures. This may involve interaction with the executive and legislative branches of government, top management of the organization initiating the evaluation program, and the transit systems subject to evaluation.</p> <p>The objectives of the evaluation and intended uses of evaluation results establish the framework for the methodology, i.e., they determine what the evaluations must accomplish. Consequently, it is important that considerable effort is taken to specify these concerns and communicate them to the transit systems subject to evaluation, the individuals responsible for developing the evaluation procedures, and those responsible for carrying out the evaluations.</p> <p>The evaluation methodology and the process are distinct in that the methodology is composed of analytical techniques and procedures while the process defines how the evaluations will be carried out. Important considerations in the development of the methodology are:</p> <ul style="list-style-type: none"> • the analytical techniques should be straight forward and easily understood; • substantial new data gathering should not be required; and • existing requirements that produce potentially useful information should be reviewed to avoid redundancy and reduce staff requirements for data gathering and analysis. <p>Considerations in the development of the evaluation process include:</p> <ul style="list-style-type: none"> • the role and responsibilities of participants throughout the evaluations; • the timing of activities and overall time requirements to conduct the evaluations; and • the need for internal controls and feedback to insure quality control. 	<p>Establishing the authority to evaluate is an important front-end activity for the development and implementation of an ongoing evaluation program. The time required to firmly establish authority to evaluate transit systems will vary according to how clear the mandate is and whether its authority is directly challenged.</p> <p>Defining evaluation objectives and the intended use of evaluation results is an important front-end activity that should precede the development of the evaluation methodology. These activities may require minimal time if the mandate for the evaluations is definitive. Otherwise, the time required can be substantial reflecting differences in opinion.</p> <p>The time required to develop an evaluation methodology and process will vary among areas. Time requirements will be affected by:</p> <ul style="list-style-type: none"> • whether new procedures are being developed or existing procedures are being adapted; • the diversity and number of transit systems being evaluated; • the complexity of the evaluation objectives and intended uses of evaluation results; and • the number of participants involved. <p>An overly ambitious schedule should not be planned for the development of the evaluation methodology and process.</p>

EXHIBIT 6 (Continued)

ACTIVITIES	CONSIDERATIONS	TIMING
<p>Prepare for the Implementation of the Evaluation Program</p>	<p>These activities serve as a transition from the development to the implementation of the evaluation program. Adequate testing and refinement of the evaluation methodology (i.e., analytical techniques) and the evaluation process (i.e., roles and responsibilities of participants, timing, etc.). In addition, there should be training by hands on experience for the evaluators and detailed debriefing of the transit operators not yet familiar with the evaluation program.</p>	<p>These activities follow the development of the evaluation program and precede its full scale implementation. The amount of time required will be influenced by:</p> <ul style="list-style-type: none"> the number of transit systems effected by the evaluation program; the familiarity of the evaluators and the transit systems with the evaluation objectives, procedures and uses of results; and the complexity of the evaluation methodology including data requirements. <p>A reasonable benchmark is one year.</p>
<p>Communicate with Transit Systems</p>	<p>Communication with the transit systems that will be evaluated is important to the successful implementation of the evaluation program. The frequency and nature of communication with the transit systems will be determined, in part, by the role the operators play in the development of the evaluation program. The more integral the operators are in determining the objectives of the evaluations, uses or results, and procedures used, the more involved they will be. Regardless of the level of operator involvement their concerns and recommendations should be considered and any requested information should be made readily available.</p>	<p>The timing and frequency of communication with transit systems will vary among areas developing and implementing transit evaluation programs. In some areas, some or all of the transit operators may be involved throughout the development and implementation activities. At a minimum, all operators that will be evaluated should be fully informed about the evaluation program before it is implemented.</p>

Establishing the Basis of Authority

A state or funding agency desiring to initiate an evaluation program must first establish and present the basis of its authority to conduct performance evaluations. This requires a careful review of the statements that specifically mandate or infer that performance evaluations should be conducted by the agency. As a first step, agreement should be reached within the organization initiating the evaluation program regarding its responsibilities and authority.

When this basis of authority is clearly defined through legislative or executive order, or is specifically delineated in the organization's charter of responsibilities, it will help reduce misunderstandings. Alternatively, if the basis of authority is loosely structured, it will generally be subject to interpretation and can be challenged.

If necessary, clarification of intent should be sought from the source that initiated the evaluation requirements (i.e., the legislature, city council, executive branch, etc.). In these instances, it may be appropriate to prepare a policy statement on administrative procedures that clarify the responsibilities and authority of the state or agency with regard to performance evaluation.

In the State of Michigan, it was necessary for UPTRAN to prepare a policy statement to clarify its authority to evaluate public transportation in the state.^{1/} As discussed in Section II of this report, the legislative and executive orders, considered by UPTRAN as a mandate to conduct evaluations and annually report on the performance of public transportation programs, require the measurement of public transportation efficiency and effectiveness, but do not specifically stipulate that the state develop and implement an evaluation program. Rather, the requirements were inferred from the legislation and statements made by the governor, and the State Auditor General's May 1979 report.

During the development of the evaluation program, UPTRAN's authority was questioned by the transit systems subject to evaluation. The statement prepared by UPTRAN in November, 1980 was generally accepted, and since its distribution challenges to UPTRAN's authority to evaluate transit in the state have subsided.

^{1/} This document also served to clarify the objectives of the evaluations and intended uses of evaluation results.

Defining the Objectives and Intended Uses of Evaluation Results

A state or funding agency initiating a performance evaluation program should define the objectives of the evaluations and intended uses of evaluation results. This information is of prime importance both to the public transportation systems subject to evaluation and to the state or agency developing the evaluation program. The information communicates to the transit systems why the evaluations are being conducted and how the systems may be affected. The uncertainty of not knowing the potential effects of evaluations could be unsettling and potentially threatening to the systems subject to evaluation.

The objectives of the evaluation and intended uses of evaluation results are important to the state or agency responsible for the evaluation program because they establish the framework for the evaluation procedures. It is necessary to know first what you must accomplish before a method can be defined, i.e., the methodology should be developed to fit predefined objectives and uses of evaluation results.

One of the first steps in the project conducted by UPTRAN to Develop and Test an Evaluation Methodology for Mid-Size Transit in Michigan was the development of evaluation objectives. The objectives included the systematic and routine review of performance to:

- o increase the understanding about public transportation operations and performance in the State of Michigan by the State Department of Transportation, the State Legislature, and other interests;
- o facilitate the exchange of information among public transportation systems particularly in areas where there are innovative operations and outstanding performance;
- o monitor the use of public funds for public transportation, service development and delivery; and
- o identify opportunities to improve performance by promoting more efficient and effective transit services.

Specification of the intended uses of evaluation results, generally complementing the objectives, was also made, but was somewhat less definitive. UPTRAN stated that

the evaluation results would serve as an important new source of information available to the legislature, the state and the public transportation systems. UPTRAN also indicated that it intended to use the information as input to its annual report on public transportation performance and progress required by Act 51. Other potential uses of evaluation results were not clearly defined, but it was apparent that over time, additional uses might be considered.

Developing an Evaluation Methodology and Evaluation Process

The distinction between an evaluation methodology and an evaluation process is that the methodology includes the analytical techniques while the process defines the timing of activities, roles of participants, and related concerns associated with implementation. Both the methodology and the process should be developed to meet the objectives of conducting the evaluation and support the intended uses of the evaluation results.

The initial project in Michigan focused on the development of the methodology with little emphasis on the evaluation process. Important findings of the project in which the evaluation methodology was developed were that the time requirements to develop an evaluation process are substantial and that the evaluation process should not be overlooked or considered secondary to the evaluation methodology.

Development of the Evaluation Methodology

During the development of the evaluation methodology, it is important that the state or agency identify current, ongoing activities that may, in part, meet the objectives of the evaluation. Similarly, every effort should be made to make use of available information to minimize redundancy. It is likely that some information useful for evaluation purposes will be readily available. This may include information prepared by the public transportation system, the state, or other agencies to meet other existing requirements. These requirements may include local, state, or federal planning, service monitoring, audit, grant application, or reporting requirements.

Use of existing information has several benefits. It may reduce the staff requirements for carrying out the evaluations both for the public transportation system and the state or agency. Using existing information may also reduce the elapsed time before findings and conclusions can be developed from the evaluations.

To the extent possible, the analytical techniques included in the evaluation methodology should be straightforward and easily understood. Simple analytical techniques will lend to the acceptance of the methodology and ease of training people to conduct the evaluations and implement the evaluation procedures.

These guidelines served as the basis for the development of the evaluation methodology in Michigan. Importantly, data required under UMTA Section 15 (financial and operating statistic) reporting requirements is the basis for the diagnostic phase of the evaluation. This serves to minimize data gathering by the transit systems and should insure that data is routinely available to UPTRAN.

Development of the Evaluation Process

The evaluation process that is established should reflect the capabilities and interests of the participants in the evaluation program. For example, the planned timing of activities should liberally allow for the current schedule and staff commitments of the public transportation systems and state or agency personnel involved. An overly ambitious schedule is likely to be unachievable, particularly during the initial years in which the evaluations are performed. Adequate review periods of preliminary evaluation findings should be incorporated in the evaluation program to allow for rebuttal by the evaluated systems, as appropriate. This feedback enhances the likelihood that the evaluation results will accurately reflect the situation of the public transportation systems.

An evaluation process sensitive to these concerns is currently being developed in Michigan for the mid-size transit systems. The statewide pilot test activities will include:

- o assessment of the time requirements of each step of the evaluations together with an assessment of the schedule and time commitments of the transit operators;
- o development, testing and discussion of the roles and responsibilities of UPTRAN and transit system staff;
- o interaction among UPTRAN, the transit operators and the steering committee, throughout the pilot test focusing on critical milestones including the initiation and completion of the diagnostic and detailed phases of the evaluations; and

- o review and discussion of evaluation findings before the results are documented or presented.

Preparing for the Implementation of the Evaluation Program

The development of an evaluation program should be followed by a period of transition before implementation. The objectives of the transition period are to 1) allow for a final testing and refinement of the methodology and the evaluation process, and 2) ensure that all participants are trained and informed, as appropriate.

Testing an evaluation program is essential because the ability to meet objectives will be uncertain. Refinements and tailoring of the evaluation methodology and process will probably result from testing. Adequate training of state or agency staff involved in the evaluation program is also essential. The transition period offers an important opportunity for this training. By practicing in a test environment, direct experience in conducting the evaluations can be obtained.

The time required to test the evaluation methodology, introduce it to the public transportation systems, and train state or agency staff in its application will be influenced by:

- o the number of systems to be evaluated;
- o the familiarity of the systems with the objectives of the evaluation, the use of results, and the evaluation procedures; and
- o the complexity of the evaluation methodology, including data requirements.

A period of one year is, in general, a reasonable benchmark.

The statewide pilot testing in Michigan will serve as the transition period before the evaluation program for mid-size transit systems is implemented. Specific elements of the methodology have been identified by UPTRAN, the steering committee, and the transit operators for further testing and refinements. During the pilot test, UPTRAN staff is being trained in all phases of the evaluation; and the transit operators are being more fully informed about the evaluation activities. A twelve to eighteen month period of transition is currently planned.

Communicating with Public Transportation Systems

Communication with the public transportation systems is important for establishing the groundwork for a state or agency to evaluate performance. Communication between the evaluator and the systems subject to evaluation may occur at each stage of the development, testing and ultimate implementation of the evaluation program. To a great extent, the public transportation systems' role in the development and implementation of the evaluation procedures determines the nature and frequency of communication between the systems and the state or agency.

In some areas, some or all of the systems that will be evaluated may be directly involved in the decision making to develop and implement the evaluation program. In other areas, communication with the systems may be more informational. Regardless of the systems' role, however, lines of communication should be established so that operator concerns and recommendations are considered and requested information is readily available. At a minimum, all systems that will be evaluated should be fully informed about the evaluation program before it is implemented. (This effort should begin with a discussion of the objectives and intended uses of evaluation results.)

Representatives of the mid-size transit systems in Michigan were involved in the development and testing of the evaluation methodology from the outset of the project. Initially, a member of the MPTA served on the project steering committee as the representative of all of the mid-size transit systems.^{1/} In retrospect, UPTRAN believes that the project steering committee should have included representatives from the transit systems in addition to the MPTA. The MPTA serves largely as a forum for the transit systems and acts as their lobbyist in the state legislature. Greater technical expertise in evaluation and closer coordination with the transit operators could have facilitated the development of the methodology and the period of transition to implementation.

^{1/} As is stated in Section II of this report, UPTRAN had originally contacted the Capital Area Transportation Authority (CATA) requesting its participation on the Committee. The invitation was declined, and UPTRAN was informed that the MPTA could serve as the representative for the transit systems.

The current project to Test and Refine the Evaluation Methodology (developed in the 1979 study) includes 1) a steering committee with representatives from three of the mid-size transit systems (each of whom volunteered to participate on the committee), and 2) regularly scheduled meetings with representatives of all of the mid-size transit systems. An objective of this project is to improve communication with the mid-size transit systems with regard to the evaluation methodology and its application.

PUBLIC TRANSPORTATION SYSTEM CONCERNS AND PERSPECTIVES REGARDING PERFORMANCE EVALUATION

The concerns and perspectives of public transportation systems regarding the evaluation of their performance by states or other funding agencies will vary from system to system. In general, however, the following questions are likely to be raised:

- o How will the evaluation results be used?
- o Will the allocation of funding be affected by the results of the evaluations? If so, how?
- o What will the evaluations require of the public transportation systems in terms of staff and management time and data?
- o Who will conduct the evaluations?
- o What recourse does a system have if it disagrees with the evaluation conclusions?
- o What benefits can be expected from the evaluation results?
- o Is state or funding agency involvement in public transportation system management and operation exceeding established limits of authority and responsibility?
- o Are peer comparisons valid?
- o Are the proposed evaluation procedures redundant with current reporting or program monitoring activities for the system?

Simply stated, a primary concern of public transportation systems is how they may be affected by evaluations of

their performance by an outside agency. Specifically, the systems are concerned about how the evaluations may affect:

- o financial resources;
- o staff resources;
- o control of management over internal operations and decision-making; and
- o local officials' and the public's perception of the system and its management.

These are legitimate concerns because the performance evaluations results potentially have far-reaching effects on the public transportation systems.

An important responsibility of the state or agency implementing a performance evaluation program is to anticipate and consider the concerns and perspectives of the public transportation systems subject to evaluation. Also, the mutual responsibility of systems and the state or funding agency for the provision of public transportation service must be recognized.

Exhibit 7 summarizes the concerns of public transportation systems regarding their evaluation by an outside agency and presents the suggested role of the evaluator. Each of these concerns was raised by the mid-size transit operators in Michigan and has been discussed throughout this report. Similar issues arose in Pennsylvania and California when statewide transit evaluations were initiated.

The concerns summarized on Exhibit 7, are discussed in more detail below together with the suggested role of the evaluators.

Concerns for Financial Resources

Possibly the greatest single concern of public transportation systems is how the results of a funding agency's evaluations of their performance will affect the stability of their financial assistance from that agency. There is not only concern that the amount of funds available could be reduced but also that requirements could be introduced that restrict or direct the use of available funds. This concern was continually expressed by the mid-size transit operators in Michigan.

EXHIBIT 7

TRANSIT OPERATOR CONCERNS AND PERSPECTIVES

OPERATOR'S CONCERNS	ISSUES	EVALUATOR'S ROLE
The Potential Effect of Evaluations on the Financial Resources of the Transit System	Probably the greatest single concern of transit operators is that transit system evaluations may lead to loss or restriction in use of funds necessary for their continued operation.	Potential effects of an evaluation program on transit system financing should be determined at the earliest possible date and communicated to the transit system so that they can avoid loss of funds. To the extent possible, the evaluation program should focus on service improvement and accountability, not penalty.
The Potential Effect of Evaluation on Staff Resources of the Transit System	Transit operators are concerned that conducting evaluations will require extensive use of their staff resources who are committed to activities required to manage, operate and maintain the transit services.	The evaluation procedures should make maximum use of available information, avoid redundant requirements, and minimize time demands on transit system personnel.
The Potential Effect of Evaluation on the Control of Transit Management Over Transit Operations and Decision Making	The involvement of states or other outside funding agencies in transit evaluations that can lead to recommendations for management action can be viewed as an extension into the internal management of the transit system. This traditionally has been outside their purview as most states and other funding agencies are not prepared to become extensively involved in ongoing transit management.	Evaluations should not over extend themselves into transit management. Their authority to evaluate should not interfere with the authority and responsibility of transit management.
The Potential Effect of Evaluation on the Transit System and its Management	Transit systems are concerned that evaluations are intended to uncover problems or make them look bad. This perception is counter productive and limits the potential benefits of the evaluations.	Equal effort should be given to identifying progress and strengths of a system as to improve opportunities. An environment of good will should be pursued by the evaluator.

The potential effects of an evaluation program on financing should be determined at the earliest possible date and communicated by the evaluator to the systems subject to evaluation. This enables the systems to initiate the necessary actions to avoid or minimize a loss of funds. To the extent possible, it is suggested that the evaluation program focus on service improvement and accountability, not penalty.

Concerns for Public Transportation System Staff Resources

A concern related to reductions in financial resources is the use of staff resources in conducting performance evaluations. Public transportation operators, particularly those that operate small systems and have limited staff, are concerned about the extent that the evaluations of performance will involve their employees. Many systems are likely to express concern about any additional requirements because they often are understaffed and cannot afford additional staff to perform new activities.

During the development of the evaluation procedures, the evaluator should seek to minimize the time demands on public transportation system personnel. The evaluation procedures should make maximum use of available information, avoid redundant requirements, and be simple and straightforward. Once the evaluation procedures are developed, consideration of the current schedule and time commitments of the systems should be integral to conducting the evaluations.

Concerns for Management Control over Public Transportation Operations and Decision Making

Public transportation systems may be concerned about how the introduction of routine performance evaluations by an outside agency will affect the traditional autonomy or control of management over operations and decision-making. Historically, funding agencies have acted largely as financial stewards. They have administered the distribution of funds and ensured accountability.

Representatives of the mid-size transit operators in Michigan have repeatedly expressed their concerns about extending the role of the state into performance evaluation. While there is agreement between UPTRAN and the transit operators on the need for accountability and financial stewardship, there is concern over the extent that UPTRAN may become involved with transit management and operations through the evaluation process.

Performance evaluations may lead to recommendations for improved procedures or management practices that could extend the role of outside agencies more directly into the internal management of the system. In general, however, while states and other outside agencies have a commitment to improved performance and the efficient and effective use of public funds, they do not want to get into the business of public transportation system management. Evaluations are not intended to extend the role of the evaluator into the role of the public transportation manager. Rather, management responsibilities and authority should be maintained within the public transportation system.

Concerns for the Perception of the Public Transportation System and its Management

An important concern of public transportation systems is that performance evaluations might produce incomplete or misleading information that could be misused. This argument is often made in relation to the use of peer comparison as an analytical technique.

A related concern is that as a result of a performance evaluation, a system could look bad to its local board, the public, or in comparison to the other systems being evaluated. This is based in part on the general belief that an underlying objective of performance evaluation is to discredit the evaluated systems by looking for problems or performance deficiencies rather than achievement or progress. This concern can be exacerbated if an adversary relationship exists between the evaluated system and the outside agency initiating the evaluation effort. In these instances, the system is likely to be reluctant to participate in the evaluation program and may prolong the initiation of the evaluations.

Even though it would probably be impossible to dispel all the concerns of public transportation systems about the intent of performance evaluations, it is important for the evaluator to promote goodwill and to create as objective and fair an evaluation program as possible. Substantial opportunity for input by the evaluated systems should be integral to the ongoing evaluations. Such efforts are currently being pursued in Michigan and appear to be successful.

The evaluation process may incorporate elements explicitly intended to protect the public transportation systems and therefore reduce many concerns. For example, the process could require that the systems review all evaluation results before they are distributed. In addition, at the systems' prerogative, the opportunity for a formal rebuttal.

to the findings or recommendations of the evaluation could be included. Most importantly, throughout the evaluations, equal effort should be given to identifying the progress and strengths of each evaluated system as well as its opportunities to improve.

VII. CONCLUSION

The experiences gained in Michigan in the development of a performance evaluation program for public transportation are presented to assist others to develop their program more effectively and expeditiously. UPTRAN's project to develop an evaluation methodology for its mid-size transit systems lends important documentation for use by the already growing number of states, other funding agencies, and others interested in considering performance evaluation programs.

The Michigan experience confirms that the process for an outside agency to develop and implement an evaluation program is time-consuming and sensitive. Two important lessons were learned through the experience gained in Michigan. First, it is important that the groundwork for evaluations be carefully established. The development of an evaluation methodology represents only one of a series of important activities to establish this groundwork. Developing the methodology must be preceded by establishing 1) the authority to evaluate, 2) the objectives of the evaluation, and 3) the intended uses of evaluation results. Having accomplished these activities, the evaluation methodology can be developed. Once developed, the methodology and process for its application must be tested and refined in conjunction with the transit systems that will be evaluated.

The second important lesson learned in Michigan is that the concerns and perspectives of the public transportation systems subject to evaluation must be recognized and considered. Throughout the development and implementation of an evaluation program, it is important that the organization initiating the evaluations communicates with the public transportation systems and is responsive to their concerns and perspectives.

APPENDIX A

STATE OF MICHIGAN



WILLIAM G. MILLIKEN, GOVERNOR
DEPARTMENT OF TRANSPORTATION

TRANSPORTATION BUILDING, 425 WEST OTTAWA PHONE 517-373-2090
POST OFFICE BOX 30050, LANSING, MICHIGAN 48909

JOHN P. WOODFORD, DIRECTOR

November 14, 1979

TO: Participants at the Forum on Transit Evaluation Held on October 30,
1979

Thank you for attending the forum on transit evaluation held on October 30, 1979. The comments made, questions asked, information shared and opinions expressed in the forum helped clear the air and suggested constructive actions.

The primary intent of this letter is to define what the Bureau will do and what the Bureau needs by way of cooperation from transit operators and others. This letter will also state the Bureau's objectives for doing transit evaluation and the uses intended for evaluation results. This statement of Bureau objectives for evaluation and intended use of evaluation results was requested by transit operators as a prerequisite for their cooperation.

This letter is not meant to provide an exhaustive record of what was said at the forum. It only cites some comments which, when taken together, form a program for action.

Opportunity for Cooperation

At the forum F. Norman (Pinky) Hill, a current ex-officio Member of the Board of Directors of the American Public Transit Association and a past president of the former American Transit Association, explained that the Bureau's effort to evaluate public transit services is part of a nationwide trend. He pointed out that this process provides transit operators the opportunity to have a say in the development of the methodology. He also pointed out that it is in the interest of transit operators to use this opportunity and not close the door to it.

Steering Committee

The vehicle for cooperation between the Bureau and interested parties is the steering committee which has been overseeing the work of Peat, Marwick, Mitchell & Co. The committee is being enlarged to include two additional transit operators, Bob Foy (Flint) and Terry Cooper (Kalamazoo), and a representative from UMTA, Mike Higginson.



Doug Gerleman of UMTA suggested that the steering committee should be charged to answer the following questions:

- . What kind of report is to be submitted to the Legislature?
- . What should be done with the methodology developed by the consultants?

Answering the above two questions will be the initial objectives of the steering committee.

Primary Objectives of Doing Evaluation

The Bureau's primary objectives in developing and implementing an evaluation methodology are:

1. To comply with: (a) the Governor's Budget Development Policy; (b) certain Acts of the Legislature; and, (c) some recommendations made by the Auditor General. The relevant statements in these policy/Acts/recommendations are quoted for your information in the attachment entitled "Mandate to Evaluate Bureau Programs and Projects."
2. To create a base of data and information for the use of transit operators, their local boards, local units of government and the State in performing their management roles.

Subsidiary Objectives of Doing Evaluation

The policy/Acts/recommendations mentioned above form a totality which translates into the following subsidiary Bureau Objectives:

1. To prepare an annual report on all Bureau programs and projects.
2. To provide (in the report) information regarding the efficiency and effectiveness (impacts) of these programs and projects. The report will also contain an account of expenditures from the Comprehensive Transportation Fund and the status of multiyear funding commitments. These accounts are prepared separately.

Objectives Specific to Transit

The above primary and subsidiary objectives can be defined in more detail according to program and transportation mode. The objectives of conducting evaluations which are specific to transit systems and consistent with the primary and subsidiary objectives are:

1. To prepare an annual report which will increase the understanding about transit operations and performance in the State of Michigan by the State Department of Transportation, the State Legislature, the Governor's office, local governments and other interests;
2. To monitor the efficiency and effectiveness of the use of public funds for public transit service;
3. To facilitate the exchange of information among transit systems particularly in areas where there are innovative operations and outstanding performance; and
4. To identify opportunities to improve transit performance by promoting more efficient and effective transit services.

Use of Evaluation Results and Reports

The Bureau intends to use the evaluation results and reports for the following purposes:

- . as reports or basis of reports to the Governor, the Legislature and the Auditor General;
- . as a base of data and information for program development and administration by transit management, local governments and the state;
- . as publicly available reports documenting the efficiency and effectiveness of transit services and improvements achieved;
- . as a means of identifying exemplary or innovative performance for exchange of ideas among transit operators; and
- . as a means of identifying any deficiencies and opportunities to improve transit service performance.

Steering Committee Meeting

We would like to schedule a Steering Committee meeting at 1:30 p.m. on Tuesday, December 4, 1979 in the Fourth Floor Conference Room of the Transportation Building. The agenda for the meeting is to discuss:

1. the type of evaluation report to be submitted to the Governor, the Legislature, and the Auditor General; and
2. whether and how the methodology that has been developed would be useful in writing the report.

1/ This meeting was postponed until February, 1980, when the work plan for the project to Test and Refine the Evaluation Methodology was approved.

Participants
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November 14, 1979

Any ideas you can provide to the Committee will be appreciated.

If there are any questions regarding this letter and the coming activities, please call me at 517/373-2834 or Angel Fandialan, Chairman of the Steering Committee, at 517/373-6572.

Sincerely,



Maxie C. Jackson, Jr.
Assistant Deputy Director
Urban and Public Transportation

Attachments:

1. List of Forum Participants
2. Mandate to Evaluate Bureau
Programs and Projects

Participants at the Forum
on a Proposed Methodology for Transit Evaluation
October 30, 1979

U. S. Government

UMTA, Washington, D.C., Office of Transportation Management - Brian Cudahy,
Don Chapman
UMTA, Chicago, Planning Division - Douglas Gerleman, Mike Higginson

Michigan Mid-size Urban Transit Systems

Ann Arbor Transportation Authority - Richard Simonetta, Executive Director
Battle Creek Transit - Wayne Wiley, Acting Transit Manager
Bay County Metropolitan Transportation Authority - Lewis J. Gordon, General
Manager
Flint Mass Transportation Authority - Robert Foy
Grand Rapids Area Transit Authority - Don Edmondson, General Manager
Jackson Transit System - Carl S. Buchanan, General Manager
Kalamazoo Department of Transportation - Terry Cooper, Acting Transit
Division Head
Lansing, Capital Area Transportation Authority - Clare Loudenslager, Executive
Director
Muskegon Area Transit System - Ernie Palmer, Transit Systems Supervisor
Saginaw Transit Service - Mark J. Dorfman, Public Transit Administrator

State Government

Sen. Plawecki's staff - Walter Heinritzi
Rep. Ryan's staff - Carol Norris
Sen. DeSana's staff - Patrick Harrington
House Fiscal Agency - Phil Kazmierski
Senate Fiscal Agency - Jesse Brown
Auditor General - Frank Bacigal, Assistant Auditor General
Transportation Commission Audit - James McMahon, Chief Examiner
Bureau of Urban and Public Transportation - Maxie Jackson, Jr., Gary Barrett,
William Beachler

Methodology Development Steering Committee

Angel Fandialan, Chairman - Bureau of Urban and Public Transportation
Richard Beattie - Southeastern Michigan Transportation Authority
Terry Cooper - Kalamazoo Department of Transportation
Frank DeRose - UPTRAN, Bus Transit Division
James Dunn - Michigan Public Transit Association
Michael Eberlein - Office of Inter-Agency Transportation Coordination, MDOT
Robert Foy - Flint Mass Transportation Authority
Mike Higginson - Urban Mass Transportation Administration
Keith Killough - Southeastern Michigan Council of Governments
Kunwar Rajendra - Lansing Planning Department

James Roach - Mass Transportation Planning Section, MDOT
Gordon Szlachetka - Tri-County Regional Planning Commission
David Youngs - Michigan Department of Management and Budget

Peat, Marwick, Mitchell & Co. - John Bennett, Jim Holec, Diane Schwager

Others

F. Norman Hill, Ex-Officio Member, Board of Directors, American Public
Transit Association

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Mandate to Evaluate Bureau Programs and Projects

The mandate to develop evaluation methodologies, to perform evaluations and to report evaluation findings originates from:

A. The Governor

The following general concepts are contained in the Governor's Budget Development Policy for 1980-81. They provide a framework upon which the 1980-81 Departmental Management Plan is predicated.

1. Fiscal Review and Constraints

"Sound budgetary development continues to require that State agencies submit resource and performance information which is demonstrably related to program priorities and to provable efficiency and effectiveness. In cooperation with Department of Management and Budget staff, agencies are expected to monitor and evaluate programs still more intensively." (quote excludes underlines)

2. Program Review

"In this era of growing demands for accountability, I continue to be concerned with improving the quality of agency management plans in order to enhance the analytic basis for the budget decisions that I must make. I am convinced more than ever that program needs, impacts and efficiencies should be measured and displayed in ways which allow the Legislature and the citizens of Michigan to judge in an enlightened manner the performance of state government.

Program information submitted in the management plans--need/demand, outputs, and impacts--continually should be upgraded and used as the data base of program budget analysis, evaluations, requests, and recommendations. Budget staff will continue to work with you and with legislative staff to improve the usefulness of such information."

B. The Legislature

1. Appropriation Bills

Act No. 468 of 1978 and Act No. 108 of 1979 contain the following mandate in different paragraphs but in identical wordings:

"(1) Each department or agency shall prepare and furnish to the department of management and budget, the senate and house appropriations committees, and the senate and house fiscal agencies, a statement establishing the key resource and performance data which will be used during implementation to demonstrate the efficiency and effectiveness of each program or project.

(2) When it appears to a program manager or department director that a program will not meet the program performance commitments as submitted to the legislature, the program manager or department director shall submit a written report to the members of the senate and house appropriations committees. The report shall include a detailed explanation as to why the program will not meet its anticipated level of productivity and justification as to why the commitments cannot be met. As used in this subsection, "program manager" means the individual responsible for the implementation or the ongoing management of a program."

2. Act No. 51, Section 10h(1)(b)

Sec. 10h(1) states that "by April 1 of each year the state transportation commission shall report to each member of the legislature, the governor, and the auditor general its recommendations for a transportation program. The report shall specify the following: . . .

(b) An account of all expenditures of funds distributed from the state trunkline fund and the comprehensive transportation fund to the department of transportation, eligible authorities, and eligible governmental agencies, and the progress made by the department of transportation, eligible authorities, and eligible governmental agencies in carrying out the approved transportation programs in the preceding fiscal year through the use of those funds. The progress report shall be made based on information supplied to the state transportation commission on forms authorized by the federal department of transportation. For those eligible authorities and eligible governmental agencies not receiving federal funds pursuant to the urban mass transportation act of 1964, 49 U.S.C. 1601 to 1614, the progress report shall be made upon forms supplied by the department of transportation. The progress report shall also contain the whole amount of the expenses of the department of transportation for the fiscal year."

C. The Auditor General

The Audit Report, May 24, 1979, pages 4 and 5 contains the following:

"Evaluating Improvements and Efficiency of Bus Transportation Services"

1. The bureau has developed a quarterly report which provides information on State-supported public transportation services. The report shows comparisons between the current reporting period and the same period of the prior year. However, the bureau has not developed criteria and methods to evaluate the performance and effectiveness of bus transportation systems . . .

WE AGAIN RECOMMEND THE DEPARTMENT:

- (a) DEVELOP CRITERIA AND METHODS TO DETERMINE IF STATE GAS TAXES ARE USED TO OPERATE EFFICIENT AND EFFECTIVE PUBLIC TRANSPORTATION SYSTEMS.
- (b) IN COOPERATION WITH TRANSIT AGENCIES AND AUTHORITIES, DEVELOP UNIFORM POLICIES AND METHODS TO MANAGE AND CONTROL THE OPERATING COSTS OF TRANSIT SYSTEMS AND ROUTES."

945v

APPENDIX B

DRAFT--Subject
to Revision

UPTRAN'S STATEMENT ON TRANSPORTATION SYSTEM EVALUATION

Act 51 of the State of Michigan Public Acts of 1951, as amended, provides for financial assistance to eligible governmental authorities and eligible governmental agencies involved in the delivery, improvement and maintenance of transportation services. The purpose of using State funds for public transportation assistance is to provide and enhance transportation services in Michigan.

As the administrator of funds authorized under Act 51, it is the position of the Department of Transportation that it is responsible to:

1. Actively participate in ensuring that these funds are used to provide efficient and effective transportation services;
2. Monitor the distribution and use of public funds for transportation to ensure fiscal responsibility in the use of limited resources; and
3. Assist local areas to develop and improve transportation services with minimal administrative and regulatory obstruction.

To fulfill this responsibility, the Department of Transportation intends to undertake a program of ongoing and routine evaluation of the transportation systems funded with State revenues. This program has been initiated for the development of a Public Transportation System Evaluation Methodology for the mid-size transit systems, i.e., those in Michigan's urbanized areas except SEMTA.

This methodology is scheduled for test application during the current fiscal year. Once refined and modified to reflect the findings of the test application and the inputs of mid-size public transportation operators, the methodology will serve as the model upon which subsequent evaluation efforts of other transportation modes will be based.

By highlighting the principles guiding the State in this effort, this statement clarifies objectives for and the intended use of the results from this evaluation process. This statement also describes the main features of the

Public Transportation System Evaluation Methodology developed by the State and shows the relationship between these features and the principles guiding the State's overall efforts in this area.

PRINCIPLES GUIDING THE DEVELOPMENT OF TRANSPORTATION SYSTEM
EVALUATION METHODOLOGIES FOR STATEWIDE APPLICATION

The State of Michigan intends to develop a routine and ongoing evaluation process for each transportation program which receives State financial assistance. The principles guiding the State in this effort include:

1. The State has the responsibility to undertake transportation system evaluations to ensure the efficient, effective and economical use of public funds used to support transportation services;
2. The State's overall objective for transportation system evaluation is to contribute to the improvement and development of transportation services throughout Michigan. To achieve this overall objective, the State intends to use the results of transportation system evaluations for the following purposes:
 - o To facilitate the identification and exchange of unique and creative management and operating practices throughout the State;
 - o To provide a framework for self-evaluation activities by local transportation providers;
 - o To identify opportunities for improving management and operating practices and cooperatively formulate actions designed to take advantage of these opportunities; and
 - o To strengthen the local programming and budgeting process by integrating the evaluation methodology and results in the development and review of local transportation plans.
3. The State recognizes the need to conduct transportation system evaluations within a framework that fosters cooperation with local transportation service providers and at the same time encourages the continued independence of these providers to creatively improve and enhance transportation

services in response to specific local needs and desires. In this spirit, the State is committed to the development of evaluation methodologies that both serve the needs of the State (that is, satisfy the responsibilities of the State), and at the same time offer direct benefits to individual transportation system providers and will not infringe on the role of these providers as the day-to-day managers of transportation resources.

4. The State has the responsibility to minimize the use of limited public revenues for administrative activities and is, therefore, committed to the development of evaluation methodologies that (a) maximize the use of existing data and information (b) are not redundant with existing evaluation activities conducted by the State or by the local providers, diverting their attention from their daily responsibilities.

PUBLIC TRANSPORTATION SYSTEM EVALUATION METHODOLOGY

The State will use the principles outlined above in the development and ongoing refinement of an evaluation methodology for mid-size transit systems in Michigan. The methodology was designed to produce information intended to:

- o facilitate the identification and exchange of unique and creative transit management and operating practices throughout the State;
- o identify opportunities for improving transit management and operating practices;
- o demonstrate the benefits achieved through investment in public transportation;
- o define actions designed to improve the efficient and effective use of State funds devoted to public transportation assistance; and
- o increase understanding about transit operations and performance in the State of Michigan by the State Department of Transportation, the State Legislature, and other interests.

The methodology avoids placing an excessive reporting burden on local transit operators, by relying largely on federal Section 15 data routinely reported by the operators each fiscal year.

The State has embarked on a program of transition from the development sized transit operators in Michigan. This transition program provides for:

- o further refinement and tailoring of the evaluation methodology to better meet the needs of the State and mid-size transit operators;
- o statewide pilot testing of an evaluation methodology in all mid-size transit systems in Michigan; and
- o preparation of the format and content of future annual progress reports to the Michigan State Legislature.

To complement this effort, the State has also agreed to prepare an evaluation manual for the use and benefit of the mid-size transit operators in conducting self-evaluation.

The State believes that the period of statewide pilot testing in particular will afford all of the mid-size transit operators in Michigan the opportunity to be directly involved in applying the methodology both for their own use in self-evaluation and for the State in gathering information on transit performance. Through this testing phase, the State intends to work closely with the mid-size transit operators to ensure proper adherence to the principles guiding the State's development efforts in this area.

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